

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Equistar Chemicals, LP

AUTHORIZING THE OPERATION OF
Corpus Christi Plant
Industrial Organic Chemicals
All Other Basic Organic Chemical Manufacturing

LOCATED AT
Nueces County, Texas
Latitude 27° 48' 24" Longitude 97° 35' 29"
Regulated Entity Number: RN100221662

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1486 Issuance Date: _____

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
 - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
 - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. Emission units subject to 40 CFR Part 63, Subpart F, G, H, YY, ZZZZ, and DDDDD identified in the attached Applicable Requirements Summary table are subject to 30 TAC

Chapter 113, Subchapter C, § 113.110, § 113.120, § 113.130, § 113.560, § 113.1090, and § 113.1130 which incorporates the 40 CFR Part 63 Subpart by reference.

- F. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 2 (Emissions Banking and Trading of Allowances) Requirements for an electric generating facility authorized under 30 TAC Chapter 116, Subchapter I:
 - (i) Title 30 TAC § 101.332 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.333 (relating to Allocation of Allowances)
 - (iii) Title 30 TAC § 101.334 (relating to Allowance Deductions)
 - (iv) Title 30 TAC § 101.335 (relating to Allowance Banking and Trading)
 - (v) Title 30 TAC § 101.336 (relating to Emission Monitoring and Compliance Demonstration and Reporting)
 - (vi) The terms and conditions by which the emission limits are established to meet the quantity of allowances for the electric generating facility are applicable requirements of this permit
- 2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
 - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
- 3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
 - A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A,

Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

- (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(1)(E)
- (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
- (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:
 - (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
 - (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
 - (3) Records of all observations shall be maintained.
 - (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance

from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.

- (2) Records of all observations shall be maintained.
- (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (4) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)
- (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

- (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
 - (4) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
- D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

- F. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- G. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:
 - (i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)
 - (ii) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)
- 4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: "Storage of Volatile Organic Compounds," the permit holder shall comply with the requirements of 30 TAC § 115.112(b)(1).
- 5. Permit holder shall comply with the following 30 TAC Chapter 115, Subchapter C requirements:
 - A. When filling gasoline storage vessels with a nominal capacity greater than 1,000 gallons (Stage I) at motor vehicle fuel dispensing facilities, which have dispensed less than 100,000 gallons of gasoline in any calendar month after October 31, 2014, the permit holder shall comply with the following requirements specified in 30 TAC Chapter 115, Subchapter C:
 - (i) Title 30 TAC § 115.222(3) (relating to Control Requirements), as it applies to liquid gasoline leaks, visible vapors, or significant odors
 - (ii) Title 30 TAC § 115.222(6) (relating to Control Requirements)
 - (iii) Title 30 TAC § 115.224(1) (relating to Inspection Requirements), as it applies to liquid gasoline leaks, visible vapors, or significant odors
 - (iv) Title 30 TAC § 115.226(2)(B) (relating to Recordkeeping Requirements)
- 6. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
 - A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
 - B. Title 40 CFR § 60.8 (relating to Performance Tests)
 - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
 - D. Title 40 CFR § 60.12 (relating to Circumvention)

- E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
 - F. Title 40 CFR § 60.14 (relating to Modification)
 - G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
7. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:
- A. Title 40 CFR § 61.05 (relating to Prohibited Activities)
 - B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)
 - C. Title 40 CFR § 61.09 (relating to Notification of Start-up)
 - D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)
 - E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)
 - F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)
 - G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)
 - H. Title 40 CFR § 61.15 (relating to Modification)
 - I. Title 40 CFR § 61.19 (relating to Circumvention)
8. For facilities where total annual benzene quantity from waste is greater than or equal to 10 megagrams per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:
- A. Title 40 CFR § 61.342(c)(1)(i) - (iii) (relating to Standards: General)
 - B. Title 40 CFR § 61.342(c)(2) (relating to Standards: General)
 - C. For exempting waste streams:
 - (i) Title 40 CFR § 61.342(c)(3)(ii)(A) - (C) (relating to Standards: General)
 - D. Title 40 CFR § 61.342(f)(1), and (2) (relating to Standards: General)
 - E. Title 40 CFR § 61.342(g) (relating to Standards: General)
 - F. Title 40 CFR § 61.350(a) and (b) (relating to Standards: Delay of Repair)
 - G. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions)
 - H. Title 40 CFR § 61.355(j) (relating to Test Methods, Procedures, and Compliance Provisions), for calculation procedures
 - I. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)

- J. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)
 - K. Title 40 CFR § 61.356(b)(2)(i) - (ii) (relating to Recordkeeping Requirements)
 - L. Title 40 CFR § 61.356(b)(5) (relating to Recordkeeping Requirements)
 - M. Title 40 CFR § 61.356(c) (relating to Recordkeeping Requirements)
 - N. Title 40 CFR § 61.357(a), (d)(1), (d)(2) (d)(6) and (d)(8) (relating to Reporting Requirements)
 - O. Title 40 CFR § 61.357(d)(3) (relating to Reporting Requirements)
 - P. Waste generated by remediation activities at these facilities are subject to the requirements identified under 40 CFR § 61.342 for treatment and management of waste
9. For facilities with containers subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:
- A. Title 40 CFR § 61.345(a)(1) - (3), (b), and (c) (relating to Standards: Containers)
 - B. Title 40 CFR § 61.355(h) (relating to Test Methods, Procedures and Compliance Provisions)
 - C. Title 40 CFR § 61.356(g) (relating to Recordkeeping Requirements)
 - D. Title 40 CFR § 61.356(h) (relating to Recordkeeping Requirements)
10. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.
11. For the chemical manufacturing process specified in 40 CFR Part 63, Subpart F, the permit holder shall comply with 40 CFR § 63.103(a) (relating to General Compliance, Reporting, and Recordkeeping Provisions) (Title 30 TAC Chapter 113, Subchapter C, § 113.110 incorporated by reference).
12. For the chemical manufacturing facilities subject to leak detection requirements in 40 CFR Part 63, Subpart G, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.120 incorporated by reference):
- A. General Leak Detection Requirements:
 - (i) Title 40 CFR § 63.148(d)(1) - (3), and (e) (relating to Leak Inspection Provisions)
 - (ii) Title 40 CFR § 63.148(c), (g), (g)(2), (h), and (h)(2) (relating to Leak Inspection Provisions), for monitoring and testing requirements
 - (iii) Title 40 CFR §§ 63.148(g)(2), (h)(2), (i)(1) - (2), (i)(4)(i) - (viii), (i)(5), and 63.152(a)(1) - (5), for recordkeeping requirements
 - (iv) Title 40 CFR §§ 63.148(j), 63.151(a)(6)(i) - (iii), (b)(1) - (2), (j)(1) - (3), 63.152(a)(1) - (5), (b), (b)(1)(i) - (ii), and (b)(4), for reporting requirements
 - B. For closed vent system or vapor collection systems constructed of hard piping:

- (i) Title 40 CFR § 63.148(b)(1)(ii) (relating to Leak Inspection Provisions), for monitoring and testing requirements
 - (ii) Title 40 CFR § 63.148(i)(6) (relating to Leak Inspection Provisions), for recordkeeping requirements
- 13. For benzene laden waste streams from ethylene process facilities subject to 40 CFR Part 63, Subpart YY with total annual benzene quantity from the facility of 10 megagrams per year or more the permit holder shall comply with the following requirements as specified in 40 CFR § 63.1095(b)(2) (Title 30 TAC Chapter 113, Subchapter C, § 113.560 incorporated by reference):
 - A. For facilities with waste managed in containers the permit holder shall comply with the following requirements:
 - (i) Title 40 CFR § 61.345(a)(1) - (3), (b), and (c) (relating to Standards: Containers)
 - (ii) Title 40 CFR § 61.355(h) (relating to Test Methods, Procedures and Compliance Provisions)
 - (iii) Title 40 CFR § 61.356(g) (relating to Recordkeeping Requirements)
 - (iv) Title 40 CFR § 61.356(h) (relating to Recordkeeping Requirements)
- 14. The permit holder shall comply with certified registrations submitted to the TCEQ for purposes of establishing federally enforceable emission limits. A copy of the certified registration shall be maintained with the permit. Records sufficient to demonstrate compliance with the established limits shall be maintained. The certified registration and records demonstrating compliance shall be provided, on request, to representatives of the appropriate TCEQ regional office and any local air pollution control agency having jurisdiction over the site. The permit holder shall submit updated certified registrations when changes at the site require establishment of new emission limits. If changes result in emissions that do not remain below major source thresholds, the permit holder shall submit a revision application to codify the appropriate requirements in the permit.

Additional Monitoring Requirements

- 15. Unless otherwise specified, the permit holder shall comply with the compliance assurance monitoring requirements as specified in the attached "CAM Summary" upon issuance of the permit. In addition, the permit holder shall comply with the following:
 - A. The permit holder shall comply with the terms and conditions contained in 30 TAC § 122.147 (General Terms and Conditions for Compliance Assurance Monitoring).
 - B. The permit holder shall report, consistent with the averaging time identified in the "CAM Summary," deviations as defined by the deviation limit in the "CAM Summary." Any monitoring data below a minimum limit or above a maximum limit, that is collected in accordance with the requirements specified in 40 CFR § 64.7(c), shall be reported as a deviation. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).
 - C. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the "CAM Summary," for purposes of determining whether a deviation has occurred.

However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances in order to avoid reporting deviations. All monitoring data shall be collected in accordance with the requirements specified in 40 CFR § 64.7(c).

- D. The permit holder shall operate the monitoring, identified in the attached “CAM Summary,” in accordance with the provisions of 40 CFR § 64.7.
 - E. The permit holder shall comply with the requirements of 40 CFR § 70.6(a)(3)(ii)(A) and 30 TAC § 122.144(1)(A)-(F) for documentation of all required inspections.
16. The permit holder shall comply with the periodic monitoring requirements as specified in the attached “Periodic Monitoring Summary” upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the “Periodic Monitoring Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

17. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
- A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
18. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
19. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit’s compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

20. The permit holder shall comply with the following requirements for Air Quality Standard Permits:
- A. Registration requirements listed in 30 TAC § 116.611, unless otherwise provided for in an Air Quality Standard Permit
 - B. General Conditions listed in 30 TAC § 116.615, unless otherwise provided for in an Air Quality Standard Permit
 - C. Requirements of the non-rule Air Quality Standard Permit for Pollution Control Projects

Compliance Requirements

21. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
22. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:
- A. The permit holder shall comply with the compliance schedule as required in 30 TAC § 117.9300 for electric utilities in East and Central Texas.
23. Use of Discrete Emission Credits to comply with the applicable requirements:
- A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables
 - B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

24. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Protection of Stratospheric Ozone

25. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:
- A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.
 - B. Any on site servicing, maintenance, and repair of fleet vehicle air conditioning using ozone-depleting refrigerants shall be conducted in accordance with 40 CFR Part 82, Subpart B. Permit holders shall ensure that repairs or refrigerant removal are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart B.
 - C. The permit holder shall comply with 40 CFR Part 82, Subpart F related to the disposal requirements for appliances using Class I or Class II (ozone-depleting) substances or non-exempt substitutes as specified in 40 CFR §§ 82.150 - 82.166 and the applicable Part 82 Appendices.

Temporary Fuel Shortages (30 TAC § 112.15)

26. The permit holder shall comply with the following 30 TAC Chapter 112 requirements:
- A. Title 30 TAC § 112.15 (relating to Temporary Fuel Shortage Plan Filing Requirements)
 - B. Title 30 TAC § 112.16(a), (a)(1), and (a)(2)(B) - (C) (relating to Temporary Fuel Shortage Plan Operating Requirements)
 - C. Title 30 TAC § 112.17 (relating to Temporary Fuel Shortage Plan Notification Procedures)
 - D. Title 30 TAC § 112.18 (relating to Temporary Fuel Shortage Plan Reporting Requirements)

Permit Location

27. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

28. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

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Applicable Requirements Summary	28
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Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
44	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1-111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
44A	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	R7DIV-E	30 TAC Chapter 117, Subchapter E, Division 1	No changing attributes.
44A	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-1	40 CFR Part 60, Subpart Db	No changing attributes.
44A	STATIONARY TURBINES	N/A	60GG-1	40 CFR Part 60, Subpart GG	No changing attributes.
44B	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-1	40 CFR Part 60, Subpart Db	No changing attributes.
4A/B/C/D	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
AC1	SRIC ENGINES	N/A	60IIII-01	40 CFR Part 60, Subpart IIII	No changing attributes.
AC1	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
AC2	SRIC ENGINES	N/A	60IIII-02	40 CFR Part 60, Subpart IIII	No changing attributes.
AC2	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
BIPHNLTRK	LOADING/UNLOADING OPERATIONS	N/A	R5211	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
BIPHNLTRK	LOADING/UNLOADING OPERATIONS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
BX001FL	FLARES	N/A	R1-111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
BX001FL	FLARES	N/A	<60FPS	40 CFR Part 60, Subpart A	Flare Exit Velocity = Flare exit velocity is less than 60 ft/s (18.3 m/sec)
BX001FL	FLARES	N/A	>60FPS	40 CFR Part 60, Subpart A	Flare Exit Velocity = Flare exit velocity is greater than or equal to 60 ft/s (18.3 m/sec) but less than 400 ft/s (122 m/sec)., Heating Value of Gas = Heating value is greater than 1000 Btu/scf (37.3 MJ/scm)
BX001FL	FLARES	N/A	<63FPS	40 CFR Part 63, Subpart A	Flare Exit Velocity = Flare exit velocity is less than 60 ft/s (18.3 m/sec)
BX001FL	FLARES	N/A	>63FPS	40 CFR Part 63, Subpart A	Flare Exit Velocity = Flare exit velocity is greater than or equal to 60 ft/s (18.3 m/sec) but less than 400 ft/s (122 m/sec)., Heating Value of Gas = Heating value is greater than 1000 Btu/scf (37.3 MJ/scm).
BX001FLVNT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5112-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
BX001FLVNT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63G	40 CFR Part 63, Subpart G	No changing attributes.
D8.0505	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5131	30 TAC Chapter 115, Water Separation	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
D9.0006	STORAGE TANKS/VESSELS	N/A	63G	40 CFR Part 63, Subpart G	No changing attributes.
D90004	STORAGE TANKS/VESSELS	N/A	STORE	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
DEGREASER1	SOLVENT DEGREASING MACHINES	N/A	R5412-1	30 TAC Chapter 115, Degreasing Processes	No changing attributes.
E-1606	TREATMENT PROCESS	N/A	61FF	40 CFR Part 61, Subpart FF	No changing attributes.
F-1608	STORAGE TANKS/VESSELS	N/A	R5111	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-1608	STORAGE TANKS/VESSELS	N/A	60Kb	40 CFR Part 60, Subpart Kb	No changing attributes.
F-1608	STORAGE TANKS/VESSELS	N/A	61FF	40 CFR Part 61, Subpart FF	No changing attributes.
F-1609	STORAGE TANKS/VESSELS	N/A	61FF-1	40 CFR Part 61, Subpart FF	No changing attributes.
F-1762	STORAGE TANKS/VESSELS	N/A	61FF-1	40 CFR Part 61, Subpart FF	No changing attributes.
F-1790	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
F-1791	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-1791	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
F-2002A	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2002A	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
F-2002B	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2002B	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
F-2003	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2003	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
F-2007	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2007	STORAGE TANKS/VESSELS	N/A	60Kb-1	40 CFR Part 60, Subpart Kb	No changing attributes.
F-2008	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2008	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
F-2009A	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2009A	STORAGE TANKS/VESSELS	N/A	63G	40 CFR Part 63, Subpart G	No changing attributes.
F-2101	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5131	30 TAC Chapter 115, Water Separation	No changing attributes.
F-2102C	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2102C	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
F-2104	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2104	STORAGE TANKS/VESSELS	N/A	61FF	40 CFR Part 61, Subpart FF	No changing attributes.
F-2113	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2113	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
F-2301	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2301	STORAGE TANKS/VESSELS	N/A	61FF	40 CFR Part 61, Subpart FF	No changing attributes.
F-2301	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
F-2305	STORAGE TANKS/VESSELS	N/A	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
F-2305	STORAGE TANKS/VESSELS	N/A	61FF	40 CFR Part 61, Subpart FF	No changing attributes.
F-2305	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
FUGITIVES	FUGITIVE EMISSION UNITS	N/A	60VVa- FUG	40 CFR Part 60, Subpart VVa	No changing attributes.
FUGITIVES	FUGITIVE EMISSION UNITS	N/A	61JALL	40 CFR Part 61, Subpart J	No changing attributes.
FUGITIVES	FUGITIVE EMISSION UNITS	N/A	61VALL	40 CFR Part 61, Subpart V	No changing attributes.
FUGITIVES	FUGITIVE EMISSION UNITS	N/A	63HALL	40 CFR Part 63, Subpart H	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
FUGITIVES	FUGITIVE EMISSION UNITS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
G-1704A	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	61FF	40 CFR Part 61, Subpart FF	No changing attributes.
G-1704B	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	61FF	40 CFR Part 61, Subpart FF	No changing attributes.
GRP2TKK	STORAGE TANKS/VESSELS	F-2001A, F-2001B, F-2001C, F-2015, F-2016	R5112- HVP-1	30 TAC Chapter 115, Storage of VOCs	Product Stored = VOC other than crude oil or condensate, True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia
GRP2TKK	STORAGE TANKS/VESSELS	F-2001A, F-2001B, F-2001C, F-2015, F-2016	R5112- HVP-2	30 TAC Chapter 115, Storage of VOCs	Product Stored = Crude oil and/or condensate, True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia
GRP2TKK	STORAGE TANKS/VESSELS	F-2001A, F-2001B, F-2001C, F-2015, F-2016	R5112- LOVP-1	30 TAC Chapter 115, Storage of VOCs	Product Stored = VOC other than crude oil or condensate, True Vapor Pressure = True vapor pressure is greater than or equal to 1.0 psia but less than 1.5 psia
GRP2TKK	STORAGE TANKS/VESSELS	F-2001A, F-2001B, F-2001C, F-2015, F-2016	R5112- LOVP-2	30 TAC Chapter 115, Storage of VOCs	Product Stored = Crude oil and/or condensate, True Vapor Pressure = True vapor pressure is greater than or equal to 1.0 psia but less than 1.5 psia
GRP2TKK	STORAGE TANKS/VESSELS	F-2001A, F-2001B, F-2001C, F-2015, F-2016	60K-HIVP	40 CFR Part 60, Subpart K	True Vapor Pressure = True vapor pressure is at least 1.5 psia and less than 11.1 psia
GRP2TKK	STORAGE TANKS/VESSELS	F-2001A, F-2001B, F-2001C, F-2015, F-2016	60K-LOVP	40 CFR Part 60, Subpart K	True Vapor Pressure = True vapor pressure is less than 1.5 psia

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GRP2TKK	STORAGE TANKS/VESSELS	F-2001A, F-2001B, F-2001C, F-2015, F-2016	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
GRPBOILER	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1603A, B-1603B, B-1603C, B-1603D	R112	30 TAC Chapter 112, Sulfur Compounds	No changing attributes.
GRPBOILER	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1603A, B-1603B, B-1603C, B-1603D	60D-1	40 CFR Part 60, Subpart D	No changing attributes.
GRPBOILER	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1603A, B-1603B, B-1603C, B-1603D	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
GRP-FLGAS2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	B-1601AVNT, B-1601BVNT, B-1601CVNT, B-1601DVNT, B-1601EVNT, B-1601FVNT, B-1601GVNT, B-1601HVNT, B-1601JVNT, B-1601KVNT, B-1601LVNT, B-1601MVNT, B-1601NVNT, B-1602AVNT, B-1602BVNT	115B	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRP-FLGAS2	REACTOR	B-1601AVNT, B-1601BVNT, B-1601CVNT, B-1601DVNT, B-1601EVNT, B-1601FVNT, B-1601GVNT, B- 1601HVNT, B-1601JVNT, B-1601KVNT, B-1601LVNT, B-1601MVNT, B- 1601NVNT, B-1602AVNT, B-1602BVNT	65CAR- BLRHTR	40 CFR Part 65, Subpart D	Total Design Capacity = Less than 1 gigagram per year., Vent Stream Flow Rate = Flow rate less than 0.008 scm/min., Control Device = Boiler
GRP-FLGAS2	REACTOR	B-1601AVNT, B-1601BVNT, B-1601CVNT, B-1601DVNT, B-1601EVNT, B-1601FVNT,	65CAR-FL	40 CFR Part 65, Subpart D	Total Design Capacity = 1 gigagram per year or greater., Vent Stream Flow Rate = Flow rate greater than or equal to 0.008

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
		B-1601GVNT, B-1601HVNT, B-1601JVNT, B-1601KVNT, B-1601LVNT, B-1601MVNT, B-1601NVNT, B-1602AVNT, B-1602BVNT			scm/min., Control Device = Flare
GRP-FUELGAS	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	B-1603AVNT, B-1603BVNT, B-1603CVNT, B-1603DVNT, B-1604AVNT, B-1604BVNT, B-1705VNT, B-1706VNT, B-1801VNT, B-1851VNT, B-1852VNT	115B	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRP-FURN	PROCESS HEATERS/FURNACES	B-1601A, B-1601B, B-1601C, B-1601D, B-1601E, B-1601F, B-1601G, B-1601H, B-1601J, B-1601K, B-1601L, B-1601M, B-1601N, B-1602A, B-1602B, B-1604A, B-1604B, B-1705, B-1706, B-1801, B-1851, B-1852	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
GRPLHPTK	STORAGE TANKS/VESSELS	F-1789X, F-2005	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRPLHPTK	STORAGE TANKS/VESSELS	F-1789X, F-2005	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
GRPLLPTK	STORAGE TANKS/VESSELS	F-2010A, F-2010B, FA-1663	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
GRPMHPTK	STORAGE TANKS/VESSELS	F-2102A, F-2102B	R5112	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRPMHPTK	STORAGE	F-2102A, F-2102B	61FF	40 CFR Part 61,	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
	TANKS/VESSELS			Subpart FF	
GRPMHPTK	STORAGE TANKS/VESSELS	F-2102A, F-2102B	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
GRP-NNNTWR	DISTILLATION OPERATIONS	E-1719, E-1720	65CAR- BLRHTR	40 CFR Part 65, Subpart D	Total Design Capacity = Less than 1 gigagram per year., Vent Stream Flow Rate = Flow rate less than 0.008 scm/min., Control Device = Boiler
GRP-NNNTWR	DISTILLATION OPERATIONS	E-1719, E-1720	65CAR-FL	40 CFR Part 65, Subpart D	Total Design Capacity = 1 gigagram per year or greater., Vent Stream Flow Rate = Flow rate greater than or equal to 0.008 scm/min., Control Device = Flare
L-2019A	FLARES	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
L-2019A	FLARES	N/A	<60FPS	40 CFR Part 60, Subpart A	Flare Exit Velocity = Flare exit velocity is less than 60 ft/s (18.3 m/sec)
L-2019A	FLARES	N/A	>60FPS	40 CFR Part 60, Subpart A	Flare Exit Velocity = Flare exit velocity is greater than or equal to 60 ft/s (18.3 m/sec) but less than 400 ft/s (122 m/sec)., Heating Value of Gas = Heating value is greater than 1000 Btu/scf (37.3 MJ/scm)
L-2019A	FLARES	N/A	<63FPS	40 CFR Part 63, Subpart A	Flare Exit Velocity = Flare exit velocity is less than 60 ft/s (18.3 m/sec)
L-2019A	FLARES	N/A	>63FPS	40 CFR Part 63, Subpart A	Flare Exit Velocity = Flare exit velocity is greater than or equal to 60 ft/s (18.3 m/sec) but less than 400 ft/s (122 m/sec)., Heating Value of Gas = Heating value is greater than 1000 Btu/scf (37.3 MJ/scm).

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
L-2019AVNT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5112-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
L-2019AVNT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
L-2019B	FLARES	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
L-2019B	FLARES	N/A	<60FPS	40 CFR Part 60, Subpart A	Flare Exit Velocity = Flare exit velocity is less than 60 ft/s (18.3 m/sec), Heating Value of Gas = Heating value is less than or equal to 1000 Btu/scf (37.3 MJ/scm).
L-2019B	FLARES	N/A	>60FPS	40 CFR Part 60, Subpart A	Flare Exit Velocity = Flare exit velocity is greater than or equal to 60 ft/s (18.3 m/sec) but less than 400 ft/s (122 m/sec)., Heating Value of Gas = Heating value is greater than 1000 Btu/scf (37.3 MJ/scm)
L-2019BVNT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5112-1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
L-2019BVNT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
L-2101	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5131	30 TAC Chapter 115, Water Separation	No changing attributes.
L43	LOADING/UNLOADING OPERATIONS	N/A	R5131	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
L43	LOADING/UNLOADING OPERATIONS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
PRO-BDU	CHEMICAL MANUFACTURING PROCESS	N/A	63F	40 CFR Part 63, Subpart F	No changing attributes.
PRO-HDA	CHEMICAL MANUFACTURING PROCESS	N/A	63F	40 CFR Part 63, Subpart F	No changing attributes.
PRO-OLEFIN	CHEMICAL MANUFACTURING PROCESS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
REGVUNLOAD	LOADING/UNLOADING OPERATIONS	N/A	D5211-1	30 TAC Chapter 115, Loading and Unloading of VOC	True Vapor Pressure = True vapor pressure is less than 1.5 psia., Transfer Type = Loading and unloading.
REGVUNLOAD	LOADING/UNLOADING OPERATIONS	N/A	R5211-2	30 TAC Chapter 115, Loading and Unloading of VOC	True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia., Transfer Type = Only unloading., Vapor Tight = All liquid and vapor lines are equipped with fittings which make vapor-tight connections that close automatically when disconnected.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
44	EP	R1-111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
44A	EU	R7DIV-E	Exempt	30 TAC Chapter 117, Subchapter E, Division 1	§ 117.3003(3) § 117.3003	The provisions of this division, except as specified in §117.3040 and §117.3045 of this title (relating to Continuous Demonstration of Compliance; and Notification, Recordkeeping, and Reporting Requirements), do not apply to each unit that generates electric energy primarily for internal use but that, averaged over the three most recent calendar years, sold less than one-third of its potential electrical output capacity to a utility power distribution system.	None	None	[G]§ 117.3040(j) § 117.3054(a) § 117.3054(a)(5)
44A	EU	60Db-1	SO ₂	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
44A	EU	60Db-1	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).			
44A	EU	60Db-1	PM (Opacity)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
44A	EU	60Db-1	NO _x	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	§ 60.46b(g)	[G]§ 60.49b(d) § 60.49b(o) [G]§ 60.49b(p)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(2) § 60.49b(a)(3) § 60.49b(q) § 60.49b(q)(1) § 60.49b(q)(3) § 60.49b(w)
44A	EU	60GG-1	SO ₂	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(4)	None	None
44B	EU	60Db-1	SO ₂	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
44B	EU	60Db-1	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).			
44B	EU	60Db-1	PM (Opacity)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
44B	EU	60Db-1	NO _x	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
4A/B/C/D	EP	R111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute period for any source on which construction was begun after January 31, 1972.	§ 111.111(a)(1)(D) [G]§ 111.111(a)(1)(F)	§ 111.111(a)(1)(C) § 111.111(a)(1)(D)	None
AC1	EU	60III-01	NO _x	40 CFR Part 60, Subpart IIII	§ 60.4204(a) § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4218 § 94.8(a)(1)(i) § 94.8(a)(1)(ii) § 94.8(a)(1)(iii)	Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder and is a pre-2007 model year must comply	None	§ 60.4211(b)(3) [G]§ 60.4214(a)(2)	[G]§ 60.4214(a)(1)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						with the following NO _x emission limits: 17.0 g/KW-hr when maximum test speed is less than 130 rpm, 45.0 x N-0.20 g/KW-hr when maximum test speed is at least 130 but less than 2000 rpm, and 9.8 g/KW-hr when maximum test speed is 2000 rpm or more, as listed in 40 CFR 94.8(a)(1)(i)-(iii).			
AC1	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
AC2	EU	60IIII-02	NO _x	40 CFR Part 60, Subpart IIII	§ 60.4204(a) § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4218 § 94.8(a)(1)(i) § 94.8(a)(1)(ii) § 94.8(a)(1)(iii)	Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder and is a pre-2007 model year must comply with the following NO _x emission limits: 17.0 g/KW-	None	§ 60.4211(b)(3) [G]§ 60.4214(a)(2)	[G]§ 60.4214(a)(1)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						hr when maximum test speed is less than 130 rpm, 45.0 x N-0.20 g/KW-hr when maximum test speed is at least 130 but less than 2000 rpm, and 9.8 g/KW-hr when maximum test speed is 2000 rpm or more, as listed in 40 CFR 94.8(a)(1)(i)-(iii).			
AC2	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
BIPHNLTRK	EU	R5211	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(b)(2) § 115.214(b)(1)(B) § 115.214(b)(1)(D) § 115.214(b)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division except as specified.	§ 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
BIPHNLTRK	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation,	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing	The permit holder shall comply with the applicable recordkeeping	The permit holder shall comply with the applicable reporting requirements of 40 CFR

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY		requirements of 40 CFR Part 63, Subpart YY	requirements of 40 CFR Part 63, Subpart YY	Part 63, Subpart YY
BX001FL	CD	R1-111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
BX001FL	CD	<60FPS	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(i) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
BX001FL	CD	>60FPS	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(ii) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
BX001FL	CD	<63FPS	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
BX001FL	CD	>63FPS	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(ii)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
BX001FLVNT	EP	R5112-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(b) § 115.121(b) § 115.122(b)(2) § 60.18	For all persons in Nueces and Victoria Counties, any vent gas streams affected by §115.121(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).	[G]§ 115.125 § 115.126(2) ** See CAM Summary	§ 115.126 § 115.126(2)	None
BX001FLVNT	EP	63G	112(B) HAPS	40 CFR Part 63, Subpart G	[G]§ 63.113(a)(1) § 63.11 § 63.113(h) [G]§ 63.115(f)	Reduce emissions of organic HAP using a flare. §63.113(a)(1)(i)-(ii)	§ 63.114(a) § 63.114(a)(2) [G]§ 63.115(f) [G]§ 63.116(a)	[G]§ 63.117(a)(5) § 63.118(a)(1) § 63.118(a)(2) [G]§ 63.152(a) [G]§ 63.152(f)	§ 63.114(e) [G]§ 63.117(a)(5) § 63.117(f) § 63.118(f)(2) § 63.118(f)(5) [G]§ 63.151(b) § 63.151(e) [G]§ 63.151(e)(1) § 63.151(e)(2) § 63.151(e)(3) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) [G]§ 63.152(b)(2) § 63.152(c)(1) § 63.152(c)(2)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
									§ 63.152(c)(2)(i) [G]§ 63.152(c)(2)(ii) § 63.152(c)(2)(iii) § 63.152(c)(4)(ii) [G]§ 63.152(c)(6)
D8.0505	EU	R5131	VOC	30 TAC Chapter 115, Water Separation	§ 115.132(b)(3) § 115.131(b)	VOC water separator compartments must be equipped with a vapor recovery system which satisfies the provisions of §115.131(b) of this title.	[G]§ 115.135(b) § 115.136(b)(3) § 115.136(b)(4) ** See Periodic Monitoring Summary	§ 115.136(b)(3) § 115.136(b)(4)	None
D9.0006	EU	63G	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(a)(3)	Group 2 tanks not using emissions averaging as prescribed by §63.150 shall use record keeping methods in §63.123(a). Not required to comply with §63.119 to §63.123.	None	§ 63.123(a)	§ 63.152(c)(4)(iii)
D90004	EU	STORE	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.116(b)(2) § 60.18	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	[G]§ 115.117	§ 115.118(b)(4) § 115.118(b)(5)	None
DEGREASER1	EU	R5412-1	VOC	30 TAC Chapter 115, Degreasing Processes	§ 115.412(1) § 115.411(1) § 115.411(2) [G]§ 115.412(1)(A) § 115.412(1)(C) § 115.412(1)(D) [G]§ 115.412(1)(F)	No person shall own or operate a system utilizing a VOC for the cold solvent cleaning of objects without the controls listed in §115.412(1)(A)-(F), except as exempted in §115.411.	[G]§ 115.415(1) § 115.415(3) ** See Periodic Monitoring Summary	None	None
E-1606	PRO	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.348(a)(1) § 60.18 § 61.348(a)(1)(i) § 61.348(a)(2)	The owner or operator shall design, install, operate and maintain a treatment process that removes or	§ 60.18(f)(2) § 61.348(f) § 61.349(a)(1)(i) § 61.349(e)	§ 61.354(c) § 61.354(c)(3) § 61.356(e) § 61.356(e)(1)	§ 61.357(d)(7) § 61.357(d)(7)(i) § 61.357(d)(7)(iv) § 61.357(d)(7)(iv)(F)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 61.348(a)(3) § 61.348(a)(4) § 61.348(f) § 61.349(a) § 61.349(a)(1)(i) § 61.349(a)(1)(iii) § 61.349(a)(1)(iv) § 61.349(b) § 61.349(e) § 61.349(f) § 61.349(g)	destroys benzene as specified.	§ 61.349(f) § 61.354(a)(1) § 61.354(c) § 61.354(c)(3) [G]§ 61.355(h)	§ 61.356(e)(2) § 61.356(f) § 61.356(f)(1) § 61.356(h) [G]§ 61.356(i) § 61.356(j) § 61.356(j)(1) § 61.356(j)(2) § 61.356(j)(3) § 61.356(j)(7)	
F-1608	EU	R5111	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
F-1608	EU	60Kb	VOC	40 CFR Part 60, Subpart Kb	[G]§ 60.112b(a)(2)	Storage vessels specified in §60.112b(a) and equipped with an external floating roof (pontoon or double-deck type) are to meet the specifications of §60.112b(a)(2)(i)-(iii).	[G]§ 60.113b(b)(1) [G]§ 60.113b(b)(2) § 60.113b(b)(3) § 60.113b(b)(4) § 60.113b(b)(4)(i) § 60.113b(b)(4)(i)(A) § 60.113b(b)(4)(i)(B) [G]§ 60.113b(b)(4)(ii) § 60.113b(b)(4)(iii) § 60.113b(b)(5) [G]§ 60.113b(b)(6) § 60.116b(a) § 60.116b(b) § 60.116b(c) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3)	§ 60.115b [G]§ 60.115b(b)(3) § 60.116b(a) § 60.116b(b) § 60.116b(c)	§ 60.113b(b)(4)(iii) § 60.113b(b)(5) § 60.113b(b)(6)(ii) § 60.115b § 60.115b(b)(1) [G]§ 60.115b(b)(2) § 60.115b(b)(4)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F-1608	EU	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.351(a) [G]§ 60.112b(a)(2) § 61.351(a)(2) § 61.351(b)	As an alternative to the standards for tanks specified in § 61.343, an owner or operator may elect to comply with one of the following §61.351(a)(1)-(3):	[G]§ 60.113b(b)(1) [G]§ 60.113b(b)(2) § 60.113b(b)(3) § 60.113b(b)(4) § 60.113b(b)(4)(i) § 60.113b(b)(4)(i)(A) § 60.113b(b)(4)(i)(B) [G]§ 60.113b(b)(4)(iii) § 60.113b(b)(4)(iii) § 60.113b(b)(5) [G]§ 60.113b(b)(6)	§ 60.115b [G]§ 60.115b(b)(3) § 61.356(k)	§ 60.113b(b)(4)(iii) § 60.113b(b)(5) § 60.113b(b)(6)(ii) § 60.115b § 60.115b(b)(1) [G]§ 60.115b(b)(2) § 60.115b(b)(4) § 61.357(e) § 61.357(f)
F-1609	EU	61FF-1	Benzene	40 CFR Part 61, Subpart FF	§ 61.343(a)(1) § 60.18 § 61.343(a)(1)(i)(A) § 61.343(a)(1)(i)(B) § 61.343(c) § 61.343(d) § 61.349(a) § 61.349(a)(1)(i) § 61.349(a)(1)(iii) § 61.349(a)(1)(iv) § 61.349(b) § 61.349(e) § 61.349(f) § 61.349(g)	The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device.	§ 60.18(f)(2) § 61.343(a)(1)(i)(A) § 61.343(c) § 61.349(a)(1)(i) § 61.349(e) § 61.349(f) § 61.354(c) § 61.354(c)(3) [G]§ 61.355(h)	§ 61.354(c) § 61.354(c)(3) § 61.356(d) § 61.356(f) § 61.356(f)(1) § 61.356(g) § 61.356(h) § 61.356(j) § 61.356(j)(1) § 61.356(j)(2) § 61.356(j)(3) § 61.356(j)(7)	§ 61.357(d)(7) § 61.357(d)(7)(iv) § 61.357(d)(7)(iv)(F)
F-1762	EU	61FF-1	Benzene	40 CFR Part 61, Subpart FF	§ 61.343(a)(1) § 60.18 § 61.343(a)(1)(i)(A) § 61.343(a)(1)(i)(B) § 61.343(c) § 61.343(d) § 61.349(a) § 61.349(a)(1)(i) § 61.349(a)(1)(iii) § 61.349(a)(1)(iv) § 61.349(b) § 61.349(e) § 61.349(f)	The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device.	§ 60.18(f)(2) § 61.343(a)(1)(i)(A) § 61.343(c) § 61.349(a)(1)(i) § 61.349(e) § 61.349(f) § 61.354(c) § 61.354(c)(3) [G]§ 61.355(h)	§ 61.354(c) § 61.354(c)(3) § 61.356(d) § 61.356(f) § 61.356(f)(1) § 61.356(g) § 61.356(h) § 61.356(j) § 61.356(j)(1) § 61.356(j)(2) § 61.356(j)(3) § 61.356(j)(7)	§ 61.357(d)(7) § 61.357(d)(7)(iv) § 61.357(d)(7)(iv)(F)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 61.349(g)				
F-1790	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
F-1791	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	[G]§ 115.117 ** See Periodic Monitoring Summary	§ 115.118(b)(4) § 115.118(b)(5)	None
F-1791	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
F-2002A	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.116(b)(2) § 60.18	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	[G]§ 115.117	§ 115.118(b)(4) § 115.118(b)(5)	None
F-2002A	EU	63YY	112(B)	40 CFR Part 63,	§ 63.1103	The permit holder shall	The permit holder shall	The permit holder	The permit holder shall

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
			HAPS	Subpart YY	The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	comply with the applicable requirements of 40 CFR Part 63, Subpart YY	comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
F-2002B	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.116(b)(2) § 60.18	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	[G]§ 115.117	§ 115.118(b)(4) § 115.118(b)(5)	None
F-2002B	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
F-2003	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.116(b)(2) § 60.18	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	[G]§ 115.117	§ 115.118(b)(4) § 115.118(b)(5)	None
F-2003	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation,	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing	The permit holder shall comply with the applicable recordkeeping	The permit holder shall comply with the applicable reporting requirements of 40 CFR

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY		requirements of 40 CFR Part 63, Subpart YY	requirements of 40 CFR Part 63, Subpart YY	Part 63, Subpart YY
F-2007	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.116(b)(2) § 60.18	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	[G]§ 115.117	§ 115.118(b)(4) § 115.118(b)(5)	None
F-2007	EU	60Kb-1	VOC	40 CFR Part 60, Subpart Kb	§ 60.112b(b)(1) § 60.18	Storage vessels specified in §60.112b(b) and equipped with a closed vent system and control device are to meet the specifications in §60.112b(a)(3).	§ 60.113b(d) § 60.116b(a) § 60.116b(b) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3) [G]§ 60.485(b) ** See Periodic Monitoring Summary	§ 60.115b § 60.115b(d)(2) § 60.116b(a) § 60.116b(b)	§ 60.115b § 60.115b(d)(1) § 60.115b(d)(3)
F-2008	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
F-2008	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40	The permit holder shall comply with the applicable recordkeeping requirements of 40	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					equipment specification requirements of 40 CFR Part 63, Subpart YY		CFR Part 63, Subpart YY	CFR Part 63, Subpart YY	
F-2009A	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.114(b)(1)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(1)(A) [G]§ 115.117 ** See Periodic Monitoring Summary	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(1)(B)
F-2009A	EU	63G	112(B) HAPS	40 CFR Part 63, Subpart G	§ 63.119(b) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) § 63.119(b)(5)(i) § 63.119(b)(5)(ii) § 63.119(b)(5)(iii) § 63.119(b)(5)(iv) § 63.119(b)(5)(v) § 63.119(b)(5)(vi) § 63.119(b)(5)(vii) [G]§ 63.119(b)(5)(viii) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7)	Tanks using a fixed roof and an internal floating roof (defined in §63.111) to comply with §63.119(a)(1) must comply with: §63.119(b)(1)-(6).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii)	§ 63.120(a)(4) § 63.123(a) § 63.123(c) § 63.123(g) [G]§ 63.152(a)	§ 63.120(a)(5) § 63.120(a)(6) § 63.122(d) § 63.122(d)(1)(ii) § 63.122(d)(1)(iii) § 63.122(d)(2)(ii) § 63.151(a)(7) [G]§ 63.151(b) [G]§ 63.151(j) [G]§ 63.152(a) § 63.152(b) [G]§ 63.152(b)(1) § 63.152(b)(4) § 63.152(c)(1) § 63.152(c)(2) § 63.152(c)(4)(ii)
F-2101	EU	R5131	VOC	30 TAC Chapter 115, Water Separation	§ 115.132(b)(1)	VOC water separators must have each compartment totally enclosed with all openings sealed. Gauging and sampling devices shall be vapor-tight except during use.	[G]§ 115.135(b) § 115.136(b)(3) § 115.136(b)(4) ** See Periodic Monitoring Summary	§ 115.136(b)(3) § 115.136(b)(4)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F-2102C	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
F-2102C	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
F-2104	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
F-2104	EU	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.351(a) [G]§ 60.112b(a)(2) § 61.351(a)(2) § 61.351(b)	As an alternative to the standards for tanks specified in § 61.343, an owner or operator may elect to comply with one of the following §61.351(a)(1)-(3):	[G]§ 60.113b(b)(1) [G]§ 60.113b(b)(2) § 60.113b(b)(3) § 60.113b(b)(4) § 60.113b(b)(4)(i) § 60.113b(b)(4)(i)(A) § 60.113b(b)(4)(i)(B) [G]§ 60.113b(b)(4)(ii)	§ 60.115b [G]§ 60.115b(b)(3) § 61.356(k)	§ 60.113b(b)(4)(iii) § 60.113b(b)(5) § 60.113b(b)(6)(ii) § 60.115b § 60.115b(b)(1) [G]§ 60.115b(b)(2) § 60.115b(b)(4) § 61.357(e)

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 60.113b(b)(4)(iii) § 60.113b(b)(5) [G]§ 60.113b(b)(6)		§ 61.357(f)
F-2113	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
F-2113	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
F-2301	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.114(b)(1)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(1)(A) [G]§ 115.117 ** See Periodic Monitoring Summary	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(1)(B)
F-2301	EU	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.351(a) § 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(C) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv)	As an alternative to the standards for tanks specified in § 61.343, an owner or operator may elect to comply with one of the following §61.351(a)(1)-(3):	§ 60.113b(a)(1) § 60.113b(a)(2) § 60.113b(a)(4) § 60.113b(a)(5)	§ 60.115b § 60.115b(a)(2) § 61.356(k)	§ 60.113b(a)(2) § 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(3) § 61.357(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.112b(a)(1)(ix) § 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii) § 61.351(a)(1) § 61.351(b)				§ 61.357(f)
F-2301	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
F-2305	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.114(b)(1)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(1)(A) [G]§ 115.117 ** See Periodic Monitoring Summary	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(1)(B)
F-2305	EU	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.351(a) § 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(C) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv) § 60.112b(a)(1)(ix) § 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii) § 61.351(a)(1) § 61.351(b)	As an alternative to the standards for tanks specified in § 61.343, an owner or operator may elect to comply with one of the following §61.351(a)(1)-(3):	§ 60.113b(a)(1) § 60.113b(a)(2) § 60.113b(a)(4) § 60.113b(a)(5)	§ 60.115b § 60.115b(a)(2) § 61.356(k)	§ 60.113b(a)(2) § 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(3) § 61.357(e) § 61.357(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F-2305	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
FUGITIVES	EU	60VVa-FUG	VOC	40 CFR Part 60, Subpart VVa	[G]§ 60.482-2a(b)(1) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.482-2a(b)(2) § 60.482-2a(b)(2)(ii) § 60.482-2a(c)(1) [G]§ 60.482-2a(c)(2) § 60.482-2a(d) [G]§ 60.482-2a(d)(1) § 60.482-2a(d)(2) § 60.482-2a(d)(3) [G]§ 60.482-2a(d)(6) [G]§ 60.482-2a(e) § 60.482-2a(f) [G]§ 60.482-2a(g) § 60.482-2a(h) § 60.482-9a(a) § 60.482-9a(b) [G]§ 60.482-9a(d) § 60.482-9a(f) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	The instrument reading that defines a leak in a pump in light liquid service is 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers or 2,000 ppm or greater for all other pumps, as specified in paragraphs (b)(1)(i) and (ii) of this section. §60.482-2a(b)(1)(i)-(ii)	§ 60.482-1a(f)(1) § 60.482-1a(f)(2) [G]§ 60.482-1a(f)(3) § 60.482-1a(g) § 60.482-2a(a)(1) § 60.482-2a(a)(2) § 60.482-2a(b)(2)(i) [G]§ 60.482-2a(d)(4) [G]§ 60.482-2a(d)(5) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) [G]§ 60.485a(d) [G]§ 60.485a(e)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(2) [G]§ 60.486a(e)(4) § 60.486a(e)(7) [G]§ 60.486a(e)(8) § 60.486a(f) § 60.486a(f)(1) [G]§ 60.486a(h)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(b)(3) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(iii) § 60.487a(c)(2)(iv) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
FUGITIVES	EU	60VVa-FUG	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-4a(a) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.482-4a(b)(1) § 60.482-4a(b)(2) § 60.482-4a(c) § 60.482-4a(d)(1) § 60.482-4a(d)(2) § 60.482-9a(a) § 60.482-9a(b) § 60.485a(b) § 60.485a(c) § 60.485a(c)(1) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485a(c).	§ 60.482-1a(g) § 60.482-4a(b)(2) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) § 60.485a(c)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) § 60.486a(e)(10) § 60.486a(e)(3) [G]§ 60.486a(e)(4) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
FUGITIVES	EU	60VVa-FUG	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-5a(a) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-5a(b) § 60.482-5a(c) § 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1a(c) and paragraph (c) of this section.	§ 60.482-1a(g) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
FUGITIVES	EU	60VVa-FUG	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-6a(a)(1) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) § 60.482-6a(a)(2) § 60.482-6a(b) § 60.482-6a(c) § 60.482-6a(d) § 60.482-6a(e)	Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1a(c) and paragraphs (d) and (e) of this section.	§ 60.482-1a(g) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d)	§ 60.482-1a(g) § 60.485a(b)(2) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)				§ 60.487a(e)
FUGITIVES	EU	60VVa-FUG	VOC	40 CFR Part 60, Subpart VVa	§ 60.482-8a(b) § 60.482-1a(a) § 60.482-1a(b) § 60.482-1a(g) [G]§ 60.482-2a(c)(2) [G]§ 60.482-7a(e) § 60.482-8a(a) § 60.482-8a(a)(2) [G]§ 60.482-8a(c) § 60.482-8a(d) § 60.482-9a(a) § 60.482-9a(b) § 60.485a(b) § 60.485a(f) § 60.486a(a)(1) § 60.486a(a)(2) § 60.486a(k)	At a pressure relief device in light liquid or heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-1a(g) § 60.482-8a(a)(1) § 60.482-9a(a) § 60.485a(a) [G]§ 60.485a(b)(1) § 60.485a(b)(2) [G]§ 60.485a(d) [G]§ 60.485a(e)	§ 60.482-1a(g) § 60.485a(b)(2) [G]§ 60.486a(a)(3) [G]§ 60.486a(b) [G]§ 60.486a(c) § 60.486a(e) § 60.486a(e)(1) [G]§ 60.486a(e)(8)	§ 60.487a(a) § 60.487a(b) § 60.487a(b)(1) § 60.487a(c) § 60.487a(c)(1) § 60.487a(c)(2) § 60.487a(c)(2)(ix) § 60.487a(c)(3) § 60.487a(c)(4) § 60.487a(e)
FUGITIVES	EU	61JALL	Benzene	40 CFR Part 61, Subpart J	§ 61.112(a) § 61.112(b)	Each owner or operator subject to this subpart shall comply with the requirements of 40 CFR 61, Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources).	None	None	None
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	§ 61.242-1(e)	Equipment that is in vacuum service is excluded from the requirements of §61.242-2 to §61.242-11, if it is identified as required in §61.246(e)(5).	None	[G]§ 61.246(e)	None
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61,	[G]§ 61.242-2	Comply with standards for	[G]§ 61.242-2	[G]§ 61.246(a)	[G]§ 61.247(a)

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Subpart V	§ 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10	pumps. §61.242-2(a)-(g)	[G]§ 61.245(b) [G]§ 61.245(c) [G]§ 61.245(d)	[G]§ 61.246(b) [G]§ 61.246(c) [G]§ 61.246(e) [G]§ 61.246(h) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	[G]§ 61.242-3 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10	Comply with standards for compressors. §61.242-3(a)-(i)	[G]§ 61.242-3 [G]§ 61.245(b) [G]§ 61.245(c) [G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(b) [G]§ 61.246(c) [G]§ 61.246(e) [G]§ 61.246(h) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	[G]§ 61.242-4 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10	Comply with standards for pressure relief devices in gas/vapor service. §61.242-4(a)-(c)	[G]§ 61.242-4 [G]§ 61.245(b) [G]§ 61.245(c) [G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(e) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	[G]§ 61.242-5 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10	Comply with standards for sampling connection systems. §61.242-5(a)-(c)	[G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(e) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	[G]§ 61.242-6 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10	Comply with standards for open-ended valves or lines. §61.242-6(a)-(c)	[G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(e) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	[G]§ 61.242-7 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10 [G]§ 61.243-1 [G]§ 61.243-2	Comply with standards for valves. §61.242-7(a)-(h)	[G]§ 61.242-7 [G]§ 61.243-1 [G]§ 61.245(b) [G]§ 61.245(c) [G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(b) [G]§ 61.246(c) [G]§ 61.246(e) [G]§ 61.246(f) [G]§ 61.246(g) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) § 61.247(d) [G]§ 61.247(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	[G]§ 61.242-8 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10	Comply with standards for pressure relief devices in liquid service. § 61.242-8(a)-(d)	[G]§ 61.242-8 [G]§ 61.245(b) [G]§ 61.245(c) [G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(b) [G]§ 61.246(c) [G]§ 61.246(e) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	§ 61.242-9 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d)	Each product accumulator vessel shall be equipped with a closed-vent system to capture and transport any leakage from the vessel to a control device as in §61.242-11, except in §61.242-1(c).	[G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(e) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	61VALL	VHAP	40 CFR Part 61, Subpart V	[G]§ 61.242-8 § 61.242-1(a) § 61.242-1(b) § 61.242-1(d) [G]§ 61.242-10	Comply with standards for flanges and other connectors. § 61.242-8(a)-(d)	[G]§ 61.242-8 [G]§ 61.245(b) [G]§ 61.245(c) [G]§ 61.245(d)	[G]§ 61.246(a) [G]§ 61.246(b) [G]§ 61.246(c) [G]§ 61.246(e) [G]§ 61.246(i) § 61.246(j)	[G]§ 61.247(a) [G]§ 61.247(b) § 61.247(c) [G]§ 61.247(e)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.162(e) § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h)	Equipment that is in organic HAP service less than 300 hours per year is excluded from the requirements of §§63.163 - 63.174 and §63.178 if it is identified as required in §63.181(j).	[G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(i) § 63.181(j)	[G]§ 63.182(a) [G]§ 63.182(b)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.164 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Compressors. §63.164(a)-(i)	[G]§ 63.164 [G]§ 63.180(b) [G]§ 63.180(c) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(f)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.165 § 63.162(a)	Standards: Pressure relief device in gas/vapor service.	[G]§ 63.165 [G]§ 63.180(b)	§ 63.181(a) [G]§ 63.181(b)	[G]§ 63.182(a) [G]§ 63.182(b)

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	§63.165(a)-(d)	[G]§ 63.180(c) [G]§ 63.180(d)	§ 63.181(c) [G]§ 63.181(f)	§ 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.166 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Sampling connection systems. §63.166(a)-(c)	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Pumps in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Valves in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Connectors in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Agitators in heavy liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4)

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.162(h) [G]§ 63.171				[G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Instrumentation systems. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.169 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Pressure relief devices in liquid service. §63.169(a)-(d)	[G]§ 63.169 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	§ 63.170 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Surge control vessels and bottom receivers.	[G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.173 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Agitators gas/vapor service and in light liquid service. §63.173(a)-(j).	[G]§ 63.173 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.174 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171	Standards: Connectors in gas/vapor service and in light liquid service. §63.174(a)-(j)	[G]§ 63.174 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.163 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.176	Standards: Pumps in light liquid service. §63.163(a)-(j)	[G]§ 63.163 [G]§ 63.176 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h) [G]§ 63.181(h)(3) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7) § 63.181(h)(8)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.167 § 63.162(a) § 63.162(c) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.175	Standards: Open-ended valves or lines. §63.167(a)-(e).	[G]§ 63.175 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) § 63.181(h) [G]§ 63.181(h)(1) [G]§ 63.181(h)(2) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7) [G]§ 63.181(i)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63HALL	112(B) HAPS	40 CFR Part 63, Subpart H	[G]§ 63.168 § 63.162(a) § 63.162(c) [G]§ 63.162(f) [G]§ 63.162(g) § 63.162(h) [G]§ 63.171 [G]§ 63.175	Standards: Valves in gas/vapor service and in light liquid service. §63.168(a)-(j)	[G]§ 63.168 [G]§ 63.175 [G]§ 63.180(b) [G]§ 63.180(d)	§ 63.181(a) [G]§ 63.181(b) § 63.181(c) [G]§ 63.181(d) § 63.181(h) [G]§ 63.181(h)(1) [G]§ 63.181(h)(2) § 63.181(h)(4) [G]§ 63.181(h)(5) § 63.181(h)(6) § 63.181(h)(7)	[G]§ 63.182(a) [G]§ 63.182(b) § 63.182(c) [G]§ 63.182(c)(1) § 63.182(c)(4) [G]§ 63.182(d)
FUGITIVES	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40	The permit holder shall comply with the applicable recordkeeping requirements of 40	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					equipment specification requirements of 40 CFR Part 63, Subpart YY		CFR Part 63, Subpart YY	CFR Part 63, Subpart YY	
G-1704A	EU	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.347(a)(1) § 60.18 § 61.347(a)(1)(i)(A) § 61.347(a)(1)(i)(B) § 61.347(b) § 61.347(c) § 61.349(a) § 61.349(a)(1)(i) § 61.349(a)(1)(iii) § 61.349(a)(1)(iv) § 61.349(b) § 61.349(e) § 61.349(f) § 61.349(g)	Install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the oil-water separator to a control device.	§ 60.18(f)(2) § 61.347(a)(1)(i)(A) § 61.347(b) § 61.349(a)(1)(i) § 61.349(e) § 61.349(f) § 61.354(c) § 61.354(c)(3) [G]§ 61.355(h)	§ 61.354(c) § 61.354(c)(3) § 61.356(d) § 61.356(f) § 61.356(f)(1) § 61.356(g) § 61.356(h) § 61.356(j) § 61.356(j)(1) § 61.356(j)(2) § 61.356(j)(3) § 61.356(j)(7)	§ 61.357(d)(7) § 61.357(d)(7)(iv) § 61.357(d)(7)(iv)(F)
G-1704B	EU	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.347(a)(1) § 60.18 § 61.347(a)(1)(i)(A) § 61.347(a)(1)(i)(B) § 61.347(b) § 61.347(c) § 61.349(a) § 61.349(a)(1)(i) § 61.349(a)(1)(iii) § 61.349(a)(1)(iv) § 61.349(b) § 61.349(e) § 61.349(f) § 61.349(g)	Install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the oil-water separator to a control device.	§ 60.18(f)(2) § 61.347(a)(1)(i)(A) § 61.347(b) § 61.349(a)(1)(i) § 61.349(e) § 61.349(f) § 61.354(c) § 61.354(c)(3) [G]§ 61.355(h)	§ 61.354(c) § 61.354(c)(3) § 61.356(d) § 61.356(f) § 61.356(f)(1) § 61.356(g) § 61.356(h) § 61.356(j) § 61.356(j)(1) § 61.356(j)(2) § 61.356(j)(3) § 61.356(j)(7)	§ 61.357(d)(7) § 61.357(d)(7)(iv) § 61.357(d)(7)(iv)(F)
GRP2TKK	EU	R5112-HVP-1	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	specified in Table I(a) or Table II(a).			
GRP2TKK	EU	R5112-HVP-2	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
GRP2TKK	EU	R5112-LOVP-1	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(b)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(b)(1) § 115.118(b)(4) § 115.118(b)(5)	None
GRP2TKK	EU	R5112-LOVP-2	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(b)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(b)(1) § 115.118(b)(4) § 115.118(b)(5)	None
GRP2TKK	EU	60K-HIVP	VOC	40 CFR Part 60, Subpart K	§ 60.112(a)(1)	Storage vessels holding petroleum liquids with a true vapor pressure of 78 mm Hg (1.5 psia) or greater but not greater than 570 mm Hg (11.1 psia) shall have a floating roof, a vapor recovery system, or their equivalents.	§ 60.113(a) § 60.113(b) ** See Periodic Monitoring Summary	§ 60.113(a)	None

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRP2TKK	EU	60K-LOVP	VOC	40 CFR Part 60, Subpart K	§ 60.110(c) § 60.110(c)(2)	Facilities under §60.110(a) of this section with a capacity, construction or modification date as given in §60.110(c)(1) or §60.110(c)(2) are subject to the requirements of this section.	§ 60.113(a) § 60.113(b)	§ 60.113(a)	None
GRP2TKK	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
GRPBOILER	EU	R112	SO ₂	30 TAC Chapter 112, Sulfur Compounds	§ 112.9(a) § 112.9(b)	No person may cause, suffer, allow, or permit emissions of SO ₂ from any liquid fuel-fired steam generator, furnace, or heater to exceed 440 ppmv at actual stack conditions and averaged over 3-hours.	§ 112.2(a) ** See Periodic Monitoring Summary	§ 112.2(c)	§ 112.2(b)
GRPBOILER	EU	60D-1	PM	40 CFR Part 60, Subpart D	§ 60.42(a)(1)	On/after the §60.8 tests, no affected facility shall emit gases containing particulate matter in excess of 43 ng/J heat input (0.10 lb/MMBtu) derived from fossil fuel or fossil fuel and wood residue.	§ 60.46(a) § 60.46(b)(1) [G]§ 60.46(b)(2) [G]§ 60.46(d)(1) § 60.46(d)(2) [G]§ 60.46(d)(3) § 60.46(d)(6) § 60.46(d)(7) ** See Periodic Monitoring Summary	None	None

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRPBOILER	EU	60D-1	PM (Opacity)	40 CFR Part 60, Subpart D	§ 60.42(a)(2)	On/after the performance tests of §60.8, no affected facility shall emit gases exhibiting greater than 20% opacity except for one six-minute period per hour of not more than 27% opacity.	§ 60.45(b)(1) § 60.45(b)(7) [G]§ 60.45(b)(7)(i) [G]§ 60.45(b)(7)(ii) § 60.45(b)(7)(iii) § 60.45(h) [G]§ 60.45(h)(1) [G]§ 60.45(h)(2) § 60.46(a) § 60.46(b)(3)	§ 60.45(h) [G]§ 60.45(h)(1) [G]§ 60.45(h)(2)	None
GRPBOILER	EU	60D-1	SO ₂	40 CFR Part 60, Subpart D	§ 60.40(a)	The affected facility burns fuel (such as only gaseous fuels) that has no specific SO ₂ emission requirements.	§ 60.45(b)(1) § 60.45(b)(4)	None	None
GRPBOILER	EU	60D-1	NO _x	40 CFR Part 60, Subpart D	§ 60.44(a)(1)	On/after the §60.8 tests, no affected facility shall emit gases containing NO _x , expressed as NO ₂ , in excess of 86 ng/J heat input (0.2 lb/MMBtu) derived from gaseous fossil fuel.	§ 60.45(b)(3) § 60.45(b)(4) § 60.46(a) § 60.46(b)(1) [G]§ 60.46(b)(5) [G]§ 60.46(d)(1) § 60.46(d)(5) § 60.46(d)(6) § 60.46(d)(7) ** See Periodic Monitoring Summary	None	None
GRPBOILER	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRP-FLGAS2	EP	115B	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(b) § 115.121(b) § 115.122(b)(3)	For all persons in Nueces and Victoria Counties, any vent gas streams affected by §115.121(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).	[G]§ 115.125 § 115.126(2) ** See Periodic Monitoring Summary	§ 115.126 § 115.126(2)	None
GRP-FLGAS2	EP	65CAR-BLRHTR	VOC	40 CFR Part 65, Subpart D	§ 60.700(d)(1) § 60.700(a) § 60.700(b) § 60.700(d)(2) § 65.1(a) § 65.1(b) § 65.1(c) § 65.1(d) § 65.1(e) [G]§ 65.1(f) § 65.140 § 65.142(b)(2) [G]§ 65.149(a) § 65.149(b)(2) § 65.149(b)(2)(ii) § 65.3(a)(1) § 65.3(a)(3) § 65.3(a)(4) § 65.3(a)(5) § 65.3(b)(3) [G]§ 65.3(b)(5) § 65.3(c) [G]§ 65.3(d) [G]§ 65.6(b) § 65.62(a) § 65.62(b)(1) § 65.63(a)	Option to comply with part 65. Owners or operators of process vents that are subject to 40 CFR part 60, subpart RRR may choose to comply with the provisions of 40 CFR part 65, subpart D, to satisfy the requirements of §§60.702 through 60.705 and 60.708. The provisions of 40 CFR part 65 also satisfy the criteria of paragraphs (c)(2), (4), and (8) of this section. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.	None	§ 65.163(c)(1) § 65.163(c)(2) § 65.4(a)(1) § 65.4(b) § 65.4(c) § 65.4(c)(1) § 65.4(c)(3)	§ 60.700(d)(4) § 65.165(f) § 65.166(a) § 65.167(b) [G]§ 65.5(a) [G]§ 65.5(d) [G]§ 65.5(e) [G]§ 65.5(f) [G]§ 65.5(g) [G]§ 65.5(h) [G]§ 65.5(i) [G]§ 65.6

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 65.63(a)(2)				
GRP-FLGAS2	EP	65CAR-FL	VOC	40 CFR Part 65, Subpart D	§ 60.700(d)(1) § 60.700(a) § 60.700(b) § 60.700(d)(2) § 65.1(a) § 65.1(b) § 65.1(c) § 65.1(d) § 65.1(e) [G]§ 65.1(f) § 65.140 § 65.142(b)(1) [G]§ 65.147(a) § 65.3(a)(1) § 65.3(a)(3) § 65.3(a)(4) § 65.3(a)(5) § 65.3(b)(3) [G]§ 65.3(b)(5) § 65.3(c) [G]§ 65.3(d) [G]§ 65.6(b) § 65.62(a) § 65.62(b)(1) § 65.63(a)	Option to comply with part 65. Owners or operators of process vents that are subject to 40 CFR part 60, subpart RRR may choose to comply with the provisions of 40 CFR part 65, subpart D, to satisfy the requirements of §§60.702 through 60.705 and 60.708. The provisions of 40 CFR part 65 also satisfy the criteria of paragraphs (c)(2), (4), and (8) of this section. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.	§ 65.147(b) § 65.147(c) § 65.157(b)(1)	§ 65.147(b)(1) § 65.159(a) [G]§ 65.159(b) [G]§ 65.159(c) [G]§ 65.159(d) § 65.163(c)(1) § 65.163(c)(2) § 65.4(a)(1) § 65.4(b) § 65.4(c) § 65.4(c)(1) § 65.4(c)(3)	§ 60.700(d)(4) § 65.159(d)(1) § 65.165(f) § 65.166(a) § 65.166(c) § 65.167(b) [G]§ 65.5(a) [G]§ 65.5(d) [G]§ 65.5(e) [G]§ 65.5(f) [G]§ 65.5(g) [G]§ 65.5(h) [G]§ 65.5(i) [G]§ 65.6(c)
GRP-FUELGAS	EP	115B	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(b) § 115.121(b) § 115.122(b)(3)	For all persons in Nueces and Victoria Counties, any vent gas streams affected by §115.121(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).	[G]§ 115.125 § 115.126(2) ** See Periodic Monitoring Summary	§ 115.126 § 115.126(2)	None

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Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRP-FURN	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
GRPLHPTK	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
GRPLHPTK	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
GRPLLPTK	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					CFR Part 63, Subpart YY				
GRPMHPTK	EU	R5112	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.112(b)(2)(F) § 115.114(b)(2)(A) § 115.114(b)(4)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(2) § 115.114(b)(3) § 115.114(b)(4) § 115.114(b)(4)(A) [G]§ 115.117	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(2)(B) § 115.114(b)(4)(B)
GRPMHPTK	EU	61FF	Benzene	40 CFR Part 61, Subpart FF	§ 61.351(a) [G]§ 60.112b(a)(2) § 61.351(a)(2) § 61.351(b)	As an alternative to the standards for tanks specified in § 61.343, an owner or operator may elect to comply with one of the following §61.351(a)(1)-(3):	[G]§ 60.113b(b)(1) [G]§ 60.113b(b)(2) § 60.113b(b)(3) § 60.113b(b)(4) § 60.113b(b)(4)(i) § 60.113b(b)(4)(i)(A) § 60.113b(b)(4)(i)(B) [G]§ 60.113b(b)(4)(ii) § 60.113b(b)(4)(iii) § 60.113b(b)(5) [G]§ 60.113b(b)(6)	§ 60.115b [G]§ 60.115b(b)(3) § 61.356(k)	§ 60.113b(b)(4)(iii) § 60.113b(b)(5) § 60.113b(b)(6)(ii) § 60.115b § 60.115b(b)(1) [G]§ 60.115b(b)(2) § 60.115b(b)(4) § 61.357(e) § 61.357(f)
GRPMHPTK	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
GRP-NNNTWR	EP	65CAR-BLRHTR	VOC	40 CFR Part 65, Subpart D	§ 60.660(d)(1) § 60.660(a) § 60.660(b) § 60.660(d)(2)	Option to comply with part 65. Owners or operators of process vents that are subject to 40 CFR part 60,	None	§ 65.163(c)(1) § 65.163(c)(2) § 65.4(a)(1) § 65.4(b)	§ 60.660(d)(4) § 65.165(f) § 65.166(a) § 65.167(b)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 65.1(a) § 65.1(b) § 65.1(c) § 65.1(d) § 65.1(e) [G]§ 65.1(f) § 65.140 § 65.142(b)(2) [G]§ 65.149(a) § 65.149(b)(2) § 65.149(b)(2)(ii) § 65.3(a)(1) § 65.3(a)(3) § 65.3(a)(4) § 65.3(a)(5) § 65.3(b)(3) [G]§ 65.3(b)(5) § 65.3(c) [G]§ 65.3(d) [G]§ 65.6(b) § 65.62(a) § 65.62(b)(1) § 65.63(a) [G]§ 65.63(a)(2)	subpart NNN may choose to comply with the provisions of 40 CFR part 65, subpart D, to satisfy the requirements of §§60.662 through 60.665 and 60.668. The provisions of 40 CFR part 65 also satisfy the criteria of paragraphs (c)(4) and (6) of this section. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.		§ 65.4(c) § 65.4(c)(1) § 65.4(c)(3)	[G]§ 65.5(a) [G]§ 65.5(d) [G]§ 65.5(e) [G]§ 65.5(f) [G]§ 65.5(g) [G]§ 65.5(h) [G]§ 65.5(i) [G]§ 65.6
GRP-NNNTWR	EP	65CAR-FL	VOC	40 CFR Part 65, Subpart D	§ 60.660(d)(1) § 60.660(a) § 60.660(b) § 60.660(d)(2) § 65.1(a) § 65.1(b) § 65.1(c) § 65.1(d) § 65.1(e) [G]§ 65.1(f) § 65.140 § 65.142(b)(1) [G]§ 65.147(a) § 65.3(a)(1) § 65.3(a)(3)	Option to comply with part 65. Owners or operators of process vents that are subject to 40 CFR part 60, subpart NNN may choose to comply with the provisions of 40 CFR part 65, subpart D, to satisfy the requirements of §§60.662 through 60.665 and 60.668. The provisions of 40 CFR part 65 also satisfy the criteria of paragraphs (c)(4) and (6) of this section. Other provisions applying to an	§ 65.147(b) § 65.147(c) § 65.157(b) § 65.157(b)(1)	§ 65.147(b)(1) § 65.159(a) [G]§ 65.159(b) [G]§ 65.159(c) [G]§ 65.159(d) § 65.163(c)(1) § 65.163(c)(2) § 65.4(a)(1) § 65.4(b) § 65.4(c) § 65.4(c)(1) § 65.4(c)(3)	§ 60.660(d)(4) § 65.159(d)(1) § 65.165(f) § 65.166(a) § 65.166(c) § 65.167(b) [G]§ 65.5(a) [G]§ 65.5(d) [G]§ 65.5(e) [G]§ 65.5(f) [G]§ 65.5(g) [G]§ 65.5(h) [G]§ 65.5(i) [G]§ 65.6

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 65.3(a)(4) § 65.3(a)(5) § 65.3(b)(3) [G]§ 65.3(b)(5) § 65.3(c) [G]§ 65.3(d) [G]§ 65.6(b) § 65.62(a) § 65.62(b)(1) § 65.63(a) § 65.63(a)(1)	owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.			
L-2019A	EU	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
L-2019A	CD	<60FPS	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(i) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
L-2019A	CD	>60FPS	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(ii) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
L-2019A	CD	<63FPS	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.11(b)(6)(ii) § 63.11(b)(7)(i)	consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.			
L-2019A	CD	>63FPS	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(ii)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
L-2019AVNT	EP	R5112-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(b) § 115.121(b) § 115.122(b)(2) § 60.18	For all persons in Nueces and Victoria Counties, any vent gas streams affected by §115.121(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).	[G]§ 115.125 § 115.126(2) ** See CAM Summary	§ 115.126 § 115.126(2)	None
L-2019AVNT	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
L-2019B	EU	R1111	Opacity	30 TAC Chapter 111, Visible	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Emissions		be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in §101.222(b).			
L-2019B	CD	<60FPS	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(i) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
L-2019B	CD	>60FPS	Opacity	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(ii) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
L-2019BVNT	EP	R5112-1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(b) § 115.121(b) § 115.122(b)(2) § 60.18	For all persons in Nueces and Victoria Counties, any vent gas streams affected by §115.121(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3.0% oxygen for combustion devices).	[G]§ 115.125 § 115.126(2) ** See CAM Summary	§ 115.126 § 115.126(2)	None
L-2019BVNT	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					specification requirements of 40 CFR Part 63, Subpart YY		YY	YY	
L-2101	EU	R5131	VOC	30 TAC Chapter 115, Water Separation	§ 115.132(b)(3) § 115.131(b)	VOC water separator compartments must be equipped with a vapor recovery system which satisfies the provisions of §115.131(b) of this title.	[G]§ 115.135(b) § 115.136(b)(3) § 115.136(b)(4) ** See Periodic Monitoring Summary	§ 115.136(b)(3) § 115.136(b)(4)	None
L43	EU	R5131	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(b)(2) § 115.214(b)(1)(B) § 115.214(b)(1)(D) § 115.214(b)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division except as specified.	§ 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
L43	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
PRO-BDU	PRO	63F	112(B) HAPS	40 CFR Part 63, Subpart F	§ 63.100(b) [G]§ 63.102(a) [G]§ 63.102(c) § 63.104(a) [G]§ 63.104(d) § 63.104(e) § 63.104(e)(1) [G]§ 63.104(e)(2) § 63.105(d)	Except as provided in paragraphs (b)(4) and (c) of this section, the provisions of subparts F, G, and H apply to chemical manufacturing process units that meet the criteria.	§ 63.103(b)(1) § 63.103(b)(3) § 63.103(b)(4) [G]§ 63.103(b)(5) § 63.103(b)(6) [G]§ 63.104(b)	[G]§ 63.103(c) [G]§ 63.104(e)(2) [G]§ 63.104(f)(1) [G]§ 63.105(b) § 63.105(c) § 63.105(e)	§ 63.103(b)(2) [G]§ 63.103(b)(5) [G]§ 63.103(d) [G]§ 63.104(f)(2)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
PRO-HDA	PRO	63F	112(B) HAPS	40 CFR Part 63, Subpart F	§ 63.100(b) [G]§ 63.102(a) [G]§ 63.102(c) § 63.104(a) [G]§ 63.104(d) § 63.104(e) § 63.104(e)(1) [G]§ 63.104(e)(2) § 63.105(d)	Except as provided in paragraphs (b)(4) and (c) of this section, the provisions of subparts F, G, and H apply to chemical manufacturing process units that meet the criteria.	§ 63.103(b)(1) § 63.103(b)(3) § 63.103(b)(4) [G]§ 63.103(b)(5) § 63.103(b)(6) [G]§ 63.104(b)	[G]§ 63.103(c) [G]§ 63.104(e)(2) [G]§ 63.104(f)(1) [G]§ 63.105(b) § 63.105(c) § 63.105(e)	§ 63.103(b)(2) [G]§ 63.103(b)(5) [G]§ 63.103(d) [G]§ 63.104(f)(2)
PRO-OLEFIN	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1100 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
REGVUNLOAD	EU	D5211-1	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(b)(2) § 115.212(b)(2) § 115.214(b)(1)(B) § 115.214(b)(1)(D) § 115.214(b)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division except as specified.	§ 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
REGVUNLOAD	EU	R5211-2	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.212(b)(3) § 115.212(b)(2) § 115.212(b)(3)(A) § 115.212(b)(3)(A)(i) § 115.212(b)(3)(B) [G]§ 115.212(b)(3)(C) § 115.212(b)(3)(D) § 115.214(b)(1)(B) § 115.214(b)(1)(C)	All land-based VOC transfer to or from transport vessels shall be conducted in the manner specified for leak-free operations.	§ 115.212(b)(3)(B) [G]§ 115.212(b)(3)(C) § 115.214(b)(1)(A) § 115.214(b)(1)(A)(i) § 115.214(b)(1)(A)(ii) § 115.214(b)(1)(A)(iii)	§ 115.216 § 115.216(3)(A) § 115.216(3)(A)(i) § 115.216(3)(A)(iii)	None

Additional Monitoring Requirements

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CAM Summary

Unit/Group/Process Information	
ID No.: BX001FLVNT	
Control Device ID No.: BX001FL	Control Device Type: Flare
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5112-1
Pollutant: VOC	Main Standard: § 115.122(b)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: No pilot flame	
<p>CAM Text: Monitor the presence of a flare pilot flame using a thermocouple or other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. Maintain records of alarm events and duration of alarm events. Each monitoring device shall be accurate to within manufacturer's recommendations. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.</p>	

CAM Summary

Unit/Group/Process Information	
ID No.: L-2019AVNT	
Control Device ID No.: L-2019A	Control Device Type: Flare
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5112-1
Pollutant: VOC	Main Standard: § 115.122(b)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: No pilot flame	
<p>CAM Text: Monitor the presence of a flare pilot flame using a thermocouple or other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. Maintain records of alarm events and duration of alarm events. Each monitoring device shall be accurate to within manufacturer's recommendations. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.</p>	

CAM Summary

Unit/Group/Process Information	
ID No.: L-2019BVNT	
Control Device ID No.: L-2019B	Control Device Type: Flare
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5112-1
Pollutant: VOC	Main Standard: § 115.122(b)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: No pilot flame	
<p>CAM Text: Monitor the presence of a flare pilot flame using a thermocouple or other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. Maintain records of alarm events and duration of alarm events. Each monitoring device shall be accurate to within manufacturer's recommendations. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 44	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1-111
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per month	
Averaging Period: Six-minutes	
Deviation Limit: Maximum opacity = 15%	
Periodic Monitoring Text: Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9. Any opacity readings above the deviation limit shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: D8.0505	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Water Separation	SOP Index No.: R5131
Pollutant: VOC	Main Standard: § 115.132(b)(3)
Monitoring Information	
Indicator: Pilot Flame	
Minimum Frequency: Once per hour	
Averaging Period: n/a	
Deviation Limit: Any monitoring data which indicates the lack of a pilot flame shall be considered and reported as a deviation.	
<p>Periodic Monitoring Text: Measure and record the presence of the pilot flame or maintain records of alarm events and duration of alarm events. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data which indicates the lack of a pilot flame shall be considered and reported as a deviation.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: DEGREASER1	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Degreasing Processes	SOP Index No.: R5412-1
Pollutant: VOC	Main Standard: § 115.412(1)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Monthly	
Averaging Period: n/a	
Deviation Limit: Monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of 30 TAC 115.412(1)(A)-(F) shall be considered and reported as a deviation.	
Periodic Monitoring Text: Inspect equipment and record data monthly to ensure compliance with any applicable requirements in § 115.412(1)(A)-(F). Any monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of § 115.412(1)(A)-(F) shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-1791	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Structural Integrity of the Pipe	
Minimum Frequency: Emptied and degassed	
Averaging Period: n/a	
Deviation Limit: It shall be considered and reported as a deviation if repairs are not completed prior to refilling the storage vessel.	
<p>Periodic Monitoring Text: Inspect to determine the structural integrity of the fill pipe and record each time the storage vessel is emptied and degassed to ensure that it continues to meet the specifications in the above requirement. If the structural integrity of the fill pipe is in question, repairs shall be made before the storage vessel is refilled. It shall be considered and reported as a deviation if the repairs are not completed prior to refilling the storage vessel.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-1791	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Record of Tank Construction Specifications	
Minimum Frequency: n/a	
Averaging Period: n/a	
Deviation Limit: Failure to keep records of tank specifications.	
<p>Periodic Monitoring Text: Keep a record of tank construction specifications (e.g. engineering drawings) that show a fill pipe that extends from the top of a tank to have a maximum clearance of six inches (15.2 centimeters) from the bottom or, when the tank is loaded from the side, a discharge opening entirely submerged when the pipe used to withdraw liquid from the tank can no longer withdraw liquid in normal operation.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-2007	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-1
Pollutant: VOC	Main Standard: § 60.112b(b)(1)
Monitoring Information	
Indicator: VOC Concentration	
Minimum Frequency: Once per year	
Averaging Period: n/a	
Deviation Limit: A deviation shall be reported if instrument reading is greater than or equal to 500 ppm above background 60.112b(a)(3)(i).	
Periodic Monitoring Text: Measure and record fugitive emissions from the vapor collection system in accordance with part 60, appendix A, method 21.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-2007	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-1
Pollutant: VOC	Main Standard: § 60.112b(b)(1)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Once per year	
Averaging Period: n/a	
Deviation Limit: Failure to visually inspect all components of the vapor collection system.	
Periodic Monitoring Text: Visually inspect all components of the vapor collection system for defects, such as cracks, holes, gaps, loose connections, or broken or missing covers or other closure devices, that could result in air emissions.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-2009A	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Internal Floating Roof	
Minimum Frequency: annually	
Averaging Period: n/a	
Deviation Limit: Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be reported as a deviation.	
Periodic Monitoring Text: Visually inspect and record the inspection of the internal floating roof to ensure: the roof is floating on the surface of the VOC and, liquid has not accumulated on the internal floating roof, the seals are not detached, and there are no holes or tears in the seal fabric. Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-2101	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Water Separation	SOP Index No.: R5131
Pollutant: VOC	Main Standard: § 115.132(b)(1)
Monitoring Information	
Indicator: VOC Concentration	
Minimum Frequency: Quarterly	
Averaging Period: n/a	
<p>Deviation Limit: Any VOC monitoring data >500 ppmv for an interface other than a seal around a shaft that passes through a cover opening, or >10,000 ppmv for a seal around a shaft that passes through a cover opening shall be considered and reported as a deviation.</p>	
<p>Periodic Monitoring Text: Measure and record the VOC concentration using a portable analyzer to monitor VOC concentration around the immediate area of the compartment in accordance with 40 CFR Part 60, Appendix A, Method 21. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve. The owner or operator may choose to adjust the detection instrument readings for the background organic concentration level.</p> <p>The monitoring instrumentation shall be maintained and operated in accordance with manufacturer's specifications or other written procedures.</p> <p>Any monitoring data greater than the maximum VOC limit indicated in the Deviation Limit above shall be considered and reported as a deviation as required by § 122.145(2).</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-2301	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Internal Floating Roof	
Minimum Frequency: annually	
Averaging Period: n/a	
<p>Deviation Limit: Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be reported as a deviation.</p> <p>Periodic Monitoring Text: Visually inspect and record the inspection of the internal floating roof to ensure: the roof is floating on the surface of the VOC and, liquid has not accumulated on the internal floating roof, the seals are not detached, and there are no holes or tears in the seal fabric. Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be considered and reported as a deviation.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: F-2305	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: R5112
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Internal Floating Roof	
Minimum Frequency: annually	
Averaging Period: n/a	
Deviation Limit: Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be reported as a deviation.	
Periodic Monitoring Text: Visually inspect and record the inspection of the internal floating roof to ensure: the roof is floating on the surface of the VOC and, liquid has not accumulated on the internal floating roof, the seals are not detached, and there are no holes or tears in the seal fabric. Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP2TKK	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart K	SOP Index No.: 60K-HIVP
Pollutant: VOC	Main Standard: § 60.112(a)(1)
Monitoring Information	
Indicator: External Floating Roof	
Minimum Frequency: annually	
Averaging Period: n/a	
Deviation Limit: Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the floating roof, the seals are detached, or if there are holes or tears in the seal fabric and repairs are not completed.	
Periodic Monitoring Text: Visually inspect and record the inspection of the external floating roof to ensure: the roof is floating on the surface of the VOC and not on the leg supports, liquid has not accumulated on the external floating roof, the seals are not detached, and there are no holes or tears in the seal fabric. Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the external floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPBOILER	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 112, Sulfur Compounds	SOP Index No.: R112
Pollutant: SO ₂	Main Standard: § 112.9(a)
Monitoring Information	
Indicator: Sulfur Content of Fuel	
Minimum Frequency: Quarterly and within 24 hours of any fuel change	
Averaging Period: n/a	
Deviation Limit: Any monitoring data above 0.9 sulfur by weight percent in the fuel shall be considered and reported as a deviation.	
Periodic Monitoring Text: Measure and record the sulfur content of the fuel. Any monitoring data above the deviation limit shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPBOILER	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart D	SOP Index No.: 60D-1
Pollutant: PM	Main Standard: § 60.42(a)(1)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Once per week	
Averaging Period: n/a	
Deviation Limit: Maximum opacity = 20%	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is the corresponding opacity limit associated with the particulate matter standard in the underlying applicable requirement. If there is no corresponding opacity limit in the underlying applicable requirement, the maximum opacity will be established using the most recent performance test. If the result of the Test Method 9 is opacity above the corresponding opacity limit (associated with the particulate matter standard in the underlying applicable requirement or as identified as a result of a previous performance test to establish the maximum opacity limit), the permit holder shall report a deviation.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPBOILER	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart D	SOP Index No.: 60D-1
Pollutant: NO _x	Main Standard: § 60.44(a)(1)
Monitoring Information	
Indicator: NO _x Concentration	
Minimum Frequency: Monthly	
Averaging Period: n/a	
Deviation Limit: Any monitoring data above 0.21 lb/MMBtu derived from gaseous fossil fuel.	
<p>Periodic Monitoring Text: Monitor and record the nitrogen oxide concentration in the exhaust stream using a portable analyzer to monitor nitrogen oxide. The portable analyzer shall be operated in accordance with the Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). NO_x emissions shall be corrected/calculated in units of the underlying applicable emission limitation (e.g. grams per horsepower hour, pounds per MMBtu, pounds per hour, etc.)</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-FLGAS2	
Control Device ID No.: 115B-FURN	Control Device Type: Steam Generating Unit (Boiler)/Process Heater (Design heat input is greater than or equal to 44MW)
Control Device ID No.: 44B	Control Device Type: Steam Generating Unit (Boiler)/Process Heater (Design heat input is greater than or equal to 44MW)
Control Device ID No.: GRPBOILER	Control Device Type: Steam Generating Unit (Boiler)/Process Heater (Design heat input is greater than or equal to 44MW)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: 115B
Pollutant: VOC	Main Standard: § 115.122(b)
Monitoring Information	
Indicator: Period of Operation	
Minimum Frequency: n/a	
Averaging Period: n/a	
Deviation Limit: Any period of operation that is not recorded shall be considered and reported as a deviation.	
Periodic Monitoring Text: Monitor and record the periods of operation of the steam generating units or process heater. All periods that are not recorded shall be considered and reported as a deviation. The records must be readily available for inspection.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-FUELGAS	
Control Device ID No.: 115B-FURN	Control Device Type: Steam Generating Unit (Boiler)/Process Heater (Design heat input is greater than or equal to 44MW)
Control Device ID No.: 44B	Control Device Type: Steam Generating Unit (Boiler)/Process Heater (Design heat input is greater than or equal to 44MW)
Control Device ID No.: GRPBOILER	Control Device Type: Steam Generating Unit (Boiler)/Process Heater (Design heat input is greater than or equal to 44MW)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: 115B
Pollutant: VOC	Main Standard: § 115.122(b)
Monitoring Information	
Indicator: Period of Operation	
Minimum Frequency: n/a	
Averaging Period: n/a	
Deviation Limit: Any period of operation that is not recorded shall be considered and reported as a deviation.	
Periodic Monitoring Text: Monitor and record the periods of operation of the steam generating units or process heater. All periods that are not recorded shall be considered and reported as a deviation. The records must be readily available for inspection.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: L-2101	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Water Separation	SOP Index No.: R5131
Pollutant: VOC	Main Standard: § 115.132(b)(3)
Monitoring Information	
Indicator: Carbon Replacement Interval	
Minimum Frequency: At each replacement of carbon canister	
Averaging Period: n/a	
Deviation Limit: Any carbon replacement records indicating that the actual carbon replacement interval exceeds 36 months shall be considered and reported as a deviation.	
Periodic Monitoring Text: Monitor and record the replacement time interval of the carbon canister(s), as determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system. Any data, collected for a period which exceeds the maximum carbon replacement interval shall be considered and reported as a deviation.	

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The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
44A	N/A	40 CFR Part 63, Subpart YYYY	Construction or reconstruction of the stationary combustion turbine commenced on or before January 14, 2003.
44B	N/A	30 TAC Chapter 112, Sulfur Compounds	Unit does not burn liquid fuel.
D50001	N/A	30 TAC Chapter 115, Storage of VOCs	Storage capacity is less than 1,000 gallons.
D50001	N/A	40 CFR Part 60, Subpart Kb	Storage capacity is less than 75 cubic meters.
D50001	N/A	40 CFR Part 63, Subpart F	Storage vessel with a capacity less than 38 cubic meters.
D50003	N/A	40 CFR Part 60, Subpart Ka	Storage capacity is less than 40,000 gallons.
D50003	N/A	40 CFR Part 63, Subpart F	Storage vessel with a capacity less than 38 cubic meters.
D50003	N/A	40 CFR Part 63, Subpart YY	Storage vessel does not store liquids containing organic HAP.
D6.0001	N/A	40 CFR Part 63, Subpart Q	Has not operated with chromium-based water treatment chemicals after 9/8/94
D8.0505	N/A	40 CFR Part 63, Subpart VV	Facility does not control air emissions from an oil-water and organic-water separator for which another subpart of 40 CFR 60, 61, or 63 references
D9.0006	N/A	40 CFR Part 60, Subpart Ka	Does not store petroleum liquids
D90004	N/A	40 CFR Part 60, Subpart Ka	Does not store petroleum liquids
DEGREASER2	N/A	30 TAC Chapter 115, Degassing or Cleaning Vessels	The remote reservoir cold solvent cleaner uses a solvent with a TVP <= 0.6 psia at 100 degrees F with a drain area < 16 in2 and is properly disposed of in enclosed containers
DMF9006	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 75 m3 but less than 151 m3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
F-1790	N/A	40 CFR Part 60, Subpart Kb	Storage capacity is less than 75 cubic meters.
F-1791	N/A	40 CFR Part 60, Subpart K	Storage capacity is less than 40,000 gallons.
F-1791	N/A	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
F-2002A	N/A	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
F-2002B	N/A	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
F-2003	N/A	40 CFR Part 60, Subpart Kb	A storage vessel subject to the requirements of 40 CFR 63, Subpart YY and 40 CFR 60, Subpart Kb is required to comply only with the requirements of Subpart YY.
F-2007	N/A	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
F-2008	N/A	40 CFR Part 60, Subpart Kb	A storage vessel subject to the requirements of 40 CFR 63, Subpart YY and 40 CFR 60, Subpart Kb is required to comply only with the requirements of Subpart YY.
F-2009A	N/A	40 CFR Part 60, Subpart Kb	A Group 1 or Group 2 storage vessel that is also subject to the provisions of 40 CFR part 60, subpart Kb is required to comply only with 40 CFR 63, Subpart G.
F-2017A	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store VOC
F-2017A	N/A	40 CFR Part 60, Subpart Kb	Not storing a VOL
F-2017A	N/A	40 CFR Part 63, Subpart F	Tank stores liquid that does not include any organic HAP except as impurity
F-2017A	N/A	40 CFR Part 63, Subpart YY	Tank does not store liquid containing organic HAP
F-2017B	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store VOC

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
F-2017B	N/A	40 CFR Part 60, Subpart Kb	Not storing a VOL
F-2017B	N/A	40 CFR Part 63, Subpart F	Tank stores liquid that does not include any organic HAP except as impurity
F-2017B	N/A	40 CFR Part 63, Subpart YY	Tank does not store liquid containing organic HAP
F-2101	N/A	40 CFR Part 63, Subpart VV	Facility does not control air emissions from an oil-water and organic-water separator for which another subpart of 40 CFR 60, 61, or 63 references
F-2102C	N/A	40 CFR Part 60, Subpart Kb	A storage vessel subject to the requirements of 40 CFR 63, Subpart YY and 40 CFR 60, Subpart Kb is required to comply only with the requirements of Subpart YY.
F-2104	N/A	40 CFR Part 60, Subpart K	Does not store petroleum liquids
F-2104	N/A	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON CMPU
F-2113	N/A	40 CFR Part 60, Subpart K	Does not store petroleum liquids
F-2301	N/A	40 CFR Part 60, Subpart Kb	A storage vessel subject to the requirements of 40 CFR 63, Subpart YY and 40 CFR 60, Subpart Kb is required to comply only with the requirements of Subpart YY.
F-2305	N/A	40 CFR Part 60, Subpart Kb	A storage vessel subject to the requirements of 40 CFR 63, Subpart YY and 40 CFR 60, Subpart Kb is required to comply only with the requirements of Subpart YY.
F-2603	N/A	40 CFR Part 60, Subpart K	Storage capacity is less than 40,000 gallons.
F-2603	N/A	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON CMPU
F-2603	N/A	40 CFR Part 63, Subpart YY	Vessel not associated with an ethylene production unit.
GRP2TKK	F-2001A, F-2001B, F-2001C, F-2015, F-2016	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON CMPU

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
GRP-DECOKE	L-1663A, L-1663B	30 TAC Chapter 112, Sulfur Compounds	Heater does not fire liquid fuel.
GRPDIST	HC5444, HCV5904, HCV5910, HCV5915, HCV5916, PCV5659	40 CFR Part 60, Subpart NNN	Facility constructed/reconstructed/modified prior to December 30, 1983
GRP-FURN	B-1601A, B-1601B, B-1601C, B-1601D, B-1601E, B-1601F, B-1601G, B-1601H, B-1601J, B-1601K, B-1601L, B-1601M, B-1601N, B-1602A, B-1602B, B-1604A, B-1604B, B-1705, B-1706, B-1801, B-1851, B-1852	30 TAC Chapter 112, Sulfur Compounds	Heater does not fire liquid fuel.
GRPLHPTK	F-1789X, F-2005	40 CFR Part 60, Subpart K	Does not store petroleum liquids
GRPLHPTK	F-1789X, F-2005	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
GRPLLPTK	F-2010A, F-2010B, FA-1663	40 CFR Part 60, Subpart K	Storage capacity is less than 40,000 gallons.
GRPLLPTK	F-2010A, F-2010B, FA-1663	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
GRPMHPTK	F-2102A, F-2102B	40 CFR Part 60, Subpart K	Storage capacity is less than 40,000 gallons.
GRPMHPTK	F-2102A, F-2102B	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
GRPREACT	D-1701VNT, D-1704VNT, HX5902, PC8787, VT-ADBRX	40 CFR Part 60, Subpart RRR	Construction, modification, or reconstruction commenced before June 29, 1990.
GRPSMPTK	F-1826, F-2602A, FA-1783, FA-1784, N81504	40 CFR Part 60, Subpart K	Storage capacity is less than 40,000 gallons.
GRPSMPTK	F-1826, F-2602A, FA-1783, FA-1784, N81504	40 CFR Part 63, Subpart F	Storage vessel does not belong to a HON C MPU
GRPSMPTK	F-1826, F-2602A, FA-1783, FA-1784, N81504	40 CFR Part 63, Subpart YY	Vessel not associated with an ethylene production unit.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
L-2010	N/A	40 CFR Part 63, Subpart Q	Has not operated with chromium-based water treatment chemicals after 9/8/94
L-2019B	N/A	40 CFR Part 63, Subpart A	Flare does not control streams from sources regulated by 40 CFR Part 63.
L-2101	N/A	40 CFR Part 63, Subpart VV	Facility does not control air emissions from a separator referenced by another subpart of 40 CFR Parts 60, 61, or 63
PRO-GHU	N/A	40 CFR Part 63, Subpart F	Process unit does not manufacture as a primary product one or more of the chemicals listed in 63.100(b)(1)(i) or 63.100(b)(1)(ii)
PRO-OLEFIN	N/A	40 CFR Part 63, Subpart F	Process unit does not manufacture as a primary product one or more of the chemicals listed in 63.100(b)(1)(i) or 63.100(b)(1)(ii)

New Source Review Authorization References

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New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: GHGPSDTX32*	Issuance Date: 04/14/2014
PSD Permit No.: PSDTX1120	Issuance Date: 11/02/2012
PSD Permit No.: PSDTX732M2	Issuance Date: 05/30/2013
PSD Permit No.: PSDTX761M3	Issuance Date: 04/16/2014
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 136589	Issuance Date: 11/23/2015
Authorization No.: 18358	Issuance Date: 05/30/2013
Authorization No.: 4682B	Issuance Date: 04/16/2014
Authorization No.: 6745B	Issuance Date: 08/09/2018
Authorization No.: 83864	Issuance Date: 11/02/2012
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.103	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 12/24/1998
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.264	Version No./Date: 09/04/2000
Number: 106.355	Version No./Date: 09/04/2000
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.373	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.433	Version No./Date: 09/04/2000
Number: 106.452	Version No./Date: 03/14/1997
Number: 106.452	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 07/08/1998
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.473	Version No./Date: 09/04/2000
Number: 106.475	Version No./Date: 09/04/2000
Number: 106.476	Version No./Date: 09/04/2000
Number: 106.478	Version No./Date: 09/04/2000

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Number: 106.511	Version No./Date: 09/04/2000
Number: 106.512	Version No./Date: 06/13/2001
Number: 106.532	Version No./Date: 09/04/2000
Number: 8	Version No./Date: 05/05/1976

*For reference, EPA issued permit PSD-TX-761-GHG has been assigned TCEQ permit number GHGPSDTX32

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
44A	COGEN TURBINE	18358, PSDTX732M2
44B	COGEN DUCT BURNER/HRSG	18358, PSDTX732M2
44	COGEN STACK	18358, PSDTX732M2
4A/B/C/D	HP BOILER STACK	4682B, PSDTX761M3
AC1	AC1	4682B, PSDTX761M3
AC2	AC2	4682B, PSDTX761M3
B-1601A	USC FURNACE A	4682B, GHGPSDTX32, PSDTX761M3
B-1601AVNT	FUEL GAS TO USC FURNACE A	4682B, GHGPSDTX32, PSDTX761M3
B-1601B	USC FURNACE B	4682B, GHGPSDTX32, PSDTX761M3
B-1601BVNT	FUEL GAS TO USC FURNACE B	4682B, GHGPSDTX32, PSDTX761M3
B-1601C	USC FURNACE C	4682B, GHGPSDTX32, PSDTX761M3
B-1601CVNT	FUEL GAS TO USC FURNACE C	4682B, GHGPSDTX32, PSDTX761M3
B-1601D	USC FURNACE D	4682B, GHGPSDTX32, PSDTX761M3
B-1601DVNT	FUEL GAS TO USC FURNACE D	4682B, GHGPSDTX32, PSDTX761M3
B-1601E	USC FURNACE E	4682B, GHGPSDTX32, PSDTX761M3
B-1601EVNT	FUEL GAS TO USC FURNACE E	4682B, GHGPSDTX32, PSDTX761M3
B-1601F	USC FURNACE F	4682B, GHGPSDTX32, PSDTX761M3
B-1601FVNT	FUEL GAS TO USC FURNACE F	4682B, GHGPSDTX32, PSDTX761M3
B-1601G	USC FURNACE G	4682B, GHGPSDTX32, PSDTX761M3
B-1601GVNT	FUEL GAS TO USC FURNACE G	4682B, GHGPSDTX32, PSDTX761M3
B-1601H	USC FURNACE H	4682B, GHGPSDTX32, PSDTX761M3

New Source Review Authorization References by Emissions Unit

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Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
B-1601HVNT	FUEL GAS TO USC FURNACE H	4682B, GHGPSDTX32, PSDTX761M3
B-1601J	USC FURNACE J	4682B, GHGPSDTX32, PSDTX761M3
B-1601JVNT	FUEL GAS TO USC FURNACE J	4682B, GHGPSDTX32, PSDTX761M3
B-1601K	USC FURNACE K	4682B, GHGPSDTX32, PSDTX761M3
B-1601KVNT	FUEL GAS TO USC FURNACE K	4682B, GHGPSDTX32, PSDTX761M3
B-1601L	USC FURNACE L	4682B, GHGPSDTX32, PSDTX761M3
B-1601LVNT	FUEL GAS TO USC FURNACE L	4682B, GHGPSDTX32, PSDTX761M3
B-1601M	USC FURNACE M	4682B, GHGPSDTX32, PSDTX761M3
B-1601MVNT	FUEL GAS TO USC FURNACE M	4682B, GHGPSDTX32, PSDTX761M3
B-1601N	USC FURNACE N	4682B, GHGPSDTX32, PSDTX761M3
B-1601NVNT	FUEL GAS TO USC FURNACE N	4682B, GHGPSDTX32, PSDTX761M3
B-1602A	VMR FURNACE A	4682B, GHGPSDTX32, PSDTX761M3
B-1602AVNT	FUEL GAS TO VMR FURNACE A	4682B, GHGPSDTX32, PSDTX761M3
B-1602B	VMR FURNACE B	4682B, GHGPSDTX32, PSDTX761M3
B-1602BVNT	FUEL GAS TO VMR FURNACE B	4682B, GHGPSDTX32, PSDTX761M3
B-1603A	HP BOILER A	4682B, PSDTX761M3
B-1603AVNT	FUEL GAS TO HP BOILER A	4682B, PSDTX761M3
B-1603B	HP BOILER B	4682B, PSDTX761M3
B-1603BVNT	FUEL GAS TO HP BOILER B	4682B, PSDTX761M3
B-1603C	HP BOILER C	4682B, PSDTX761M3
B-1603CVNT	FUEL GAS TO HP BOILER C	4682B, PSDTX761M3

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
B-1603D	HP BOILER D	4682B, PSDTX761M3
B-1603DVNT	FUEL GAS TO HP BOILER D	4682B, PSDTX761M3
B-1604A	STEAM SUPERHEATER A	4682B, GHGPSDTX32, PSDTX761M3
B-1604AVNT	FUEL GAS TO STEAM SUPERHEATER A	4682B, GHGPSDTX32, PSDTX761M3
B-1604B	STEAM SUPERHEATER B	4682B, GHGPSDTX32, PSDTX761M3
B-1604BVNT	FUEL GAS TO STEAM SUPERHEATER B	4682B, GHGPSDTX32, PSDTX761M3
B-1705	CAT. REACTIVATION FURNACE	4682B, PSDTX761M3
B-1705VNT	FUEL GAS TO CAT. REACTIVATION FURNACE	4682B, PSDTX761M3
B-1706	DRIER REGEN HEATER	4682B, PSDTX761M3
B-1706VNT	FUEL GAS TO DRIER REGEN. HEATER	4682B, PSDTX761M3
B-1801	2ND STAGE HDA HEATER	4682B, PSDTX761M3
B-1801VNT	FUEL GAS TO 2ND STAGE HDA FEED HEATER	4682B, PSDTX761M3
B-1851	HDA FEED HEATER	4682B, PSDTX761M3
B-1851VNT	FUEL GAS TO HDA FEED HEATER	4682B, PSDTX761M3
B-1852	HDA RECYCLE HEATER	4682B, PSDTX761M3
B-1852VNT	FUEL GAS TO HDA RECYCLE HEATER	4682B, PSDTX761M3
BIPHNLTRK	BIPHENYL TRUCK RACK	106.473/09/04/2000
BX001FL	BUTADIENE PRODUCTION UNIT FLARE	6745B, 83864, PSDTX1120
BX001FLVNT	BDU FLARE VENT HEADER	6745B
D-1701VNT	C2 ACETYLENE ISO REACTOR VENT	4682B, PSDTX761M3
D-1704VNT	C3 HYDROGENATION REACTOR VENT	4682B, PSDTX761M3

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
D50001	TOLUENE TANK	6745B
D50003	CHEMICAL A TANK (FURFURAL)	6745B
D6.0001	BDU COOLING TOWER	6745B
D8.0505	CLOSED DRAIN TANK	6745B, 106.472/09/04/2000
D9.0006	DMF TANK	6745B
D90004	TURN-AROUND WASTEWATER TANK	6745B, 106.472/09/04/2000
DEGREASER1	MACHINE SHOP DEGREASER	106.454/07/08/1998
DEGREASER2	MECHANIC SHOP DEGREASER	106.454/07/08/1998
DMF9006	TOLUENE TANK	4682B, PSDTX761M3
E-1606	NESHAP STRIPPER	4682B, PSDTX761M3
E-1719	DEMETHANIZER TOWER	4682B, PSDTX761M3
E-1720	RESIDUE RECTIFIER	4682B, PSDTX761M3
F-1608	STRIPPER FEED TANK	4682B, PSDTX761M3
F-1609	STRIPPER OVERHEAD DRUM	4682B, PSDTX761M3
F-1762	CAUSTIC TOWER SKIMMING VENT	4682B, PSDTX761M3
F-1789X	WASH OIL TANK	4682B, PSDTX761M3
F-1790	LUBE OIL TANK	4682B, PSDTX761M3
F-1791	METHANOL TANK	4682B, PSDTX761M3
F-1826	CHEMICAL EC3053 TANK	106.472/09/04/2000
F-2001A	FEEDSTOCK TANK	4682B, PSDTX761M3
F-2001B	FEEDSTOCK TANK	4682B, PSDTX761M3

New Source Review Authorization References by Emissions Unit

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Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
F-2001C	FEEDSTOCK TANK	4682B, PSDTX761M3
F-2002A	STORAGE TANK	4682B, PSDTX761M3
F-2002B	STORAGE TANK	4682B, PSDTX761M3
F-2003	PRESSURE VESSEL 2003	4682B, PSDTX761M3
F-2005	RAW PYROLYSIS GASOLINE TANK	4682B, PSDTX761M3
F-2007	STORAGE TANK	4682B, PSDTX761M3
F-2008	HDA TANK	4682B, PSDTX761M3
F-2009A	BENZENE TANK	4682B, 106.478/09/04/2000, PSDTX761M3
F-2010A	HEAVY FUEL OIL TANK	4682B, PSDTX761M3
F-2010B	HEAVY FUEL OIL TANK	4682B, PSDTX761M3
F-2015	NAPHTHA FEED TANK	4682B, PSDTX761M3
F-2016	KEROSENE FEED TANK	4682B, PSDTX761M3
F-2017A	WASTEWATER TANK #1	4682B, PSDTX761M3
F-2017B	WASTEWATER TANK #2	4682B, PSDTX761M3
F-2101	OILY WATER HOLDING TANK	4682B, PSDTX761M3
F-2102A	C9 GASOLINE TANK A	4682B, PSDTX761M3
F-2102B	C9 GASOLINE TANK B	4682B, PSDTX761M3
F-2102C	SLOP OIL TANK	4682B, PSDTX761M3
F-2104	RECOVERED OIL TANK	4682B, PSDTX761M3
F-2113	HOT WATER BELT TANK	4682B, PSDTX761M3
F-2301	SPENT CAUSTIC WASTEWATER TANK	4682B, PSDTX761M3

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
F-2305	SPENT CAUSTIC WASTEWATER TANK	4682B, PSDTX761M3
F-2602A	DIESEL FUELING TANKS	4682B, 106.472/09/04/2000, PSDTX761M3
F-2603	GASOLINE FUELING TANKS	4682B, 106.472/09/04/2000, PSDTX761M3
FA-1663	LIGHT FUEL OIL TANK	4682B, PSDTX761M3
FA-1783	EXXON/NALCO CHEM. 3205A TANK	106.472/09/04/2000
FA-1784	EXXON/NALCO CHEM. 3053 TANK	106.472/09/04/2000
FUGITIVES	ALL CORPUS CHRISTI PLANT FUGITIVES	4682B, GHGPSDTX32, PSDTX761M3
G-1704A	COALESCER	4682B, PSDTX761M3
G-1704B	COALESCER	4682B, PSDTX761M3
HC5444	DEPENTANIZER OVERHEAD VENT	4682B, PSDTX761M3
HCV5904	HDA STABILIZER VENT	4682B, PSDTX761M3
HCV5910	BENZENE TOWER VENT	4682B, PSDTX761M3
HCV5915	DEOCTANIZER OVERHEAD VENT	4682B, PSDTX761M3
HCV5916	E-1854 HDA RECYCLE TOWER VENT	4682B, PSDTX761M3
HX5902	F-1851 HDA RX EFF. FLASH DRUM VENT	4682B, PSDTX761M3
L-1663A	DECOKING CYCLONE	4682B, GHGPSDTX32, PSDTX761M3
L-1663B	DECOKING CYCLONE	4682B, GHGPSDTX32, PSDTX761M3
L-2010	OLEFINS COOLING TOWER	4682B, 8/05/05/1976, PSDTX761M3
L-2019A	HOT FLARE	4682B, PSDTX761M3
L-2019AVNT	HOT FLARE VENT HEADER	4682B, PSDTX761M3
L-2019B	COLD FLARE	4682B, PSDTX761M3

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
L-2019BVNT	COLD FLARE VENT HEADER	4682B, PSDTX761M3
L-2101	OILY SEPARATOR	4682B, PSDTX761M3
L43	FUEL OIL TRUCK LOADING	4682B, PSDTX761M3
N81504	CHEMICAL EC1107A TANK	106.472/09/04/2000
PC8787	CO METHANATOR VENT	4682B, PSDTX761M3
PCV5659	RECYCLE TOWER DRUM VENT	4682B, PSDTX761M3
PRO-BDU	BUTADIENE PRODUCTION UNIT	6745B
PRO-GHU	GASOLINE HYDROGENATION UNIT	4682B, PSDTX761M3
PRO-HDA	HDA/BENZENE PRODUCTION UNIT	4682B, PSDTX761M3
PRO-OLEFIN	OLEFINS FRACTIONATION & SEPARATION	4682B, PSDTX761M3
REGVUNLOAD	UNLOADING	4682B, PSDTX761M3
VT-ADBRX	C2 ADIABATIC REACTOR DEPRESSR. VENT	4682B, PSDTX761M3

Appendix A

Acronym List 106

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
SIP	state implementation plan
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

Appendix B

Major NSR Summary Table 108

Major NSR Summary Table

Permit Number: 83864 and PSDTX1120					Issuance Date: 11/02/2012		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
BX001FL, 10 & 11	Maintenance, Startup, and Shutdown (MSS) Process Equipment and Vessel Flaring Activities	CO	721.67	54.97	3, 4, 12	1, 2, 3, 10, 11, 12, 13, 14	
		H ₂ S	0.27	0.02			
		NO _x	138.78	10.57			
		SO ₂	92.79	6.14			
		VOC	1132.54	67.86			
MSS-ATM	MSS Excluding Flaring Activities	CO	2.63	0.13	3, 4, 5, 6, 7, 12	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	
		H ₂ S	0.15	0.03			
		NO _x	1.39	0.08			
		PM/PM ₁₀	0.04	0.01			
		SO ₂	0.15	0.03			
		VOC	68.88	18.20			

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3) CO - carbon monoxide
H₂S - hydrogen sulfide

- NO_x - total oxides of nitrogen
- PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
- PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
- PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
- SO₂ - sulfur dioxide
- VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1A	USC Furnace A	CO (9) NO _x PM PM _{2.5} PM ₁₀ SO ₂ VOC	6.74 11.28 0.94 0.94 0.94 0.11 1.01	29.52 49.41 4.12 4.12 4.12 0.48 4.44	6, 12, 13	12, 13, 14	11, 12, 13
1A (13)	USC Furnace A	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12
1B	USC Furnace B	CO (9) NO _x PM PM _{2.5} PM ₁₀ SO ₂ VOC	6.74 11.28 0.94 0.94 0.94 0.11 1.01	29.52 49.41 4.12 4.12 4.12 0.48 4.44	6, 12, 13	12, 13, 14	11, 12, 13
1B (13)	USC Furnace B	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1C	USC Furnace C	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1C (13)	USC Furnace C	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12
1D	USC Furnace D	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1D (13)	USC Furnace D	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1E	USC Furnace E	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1E (13)	USC Furnace E	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12
1F	USC Furnace F	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1F (13)	USC Furnace F	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1G	USC Furnace G	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1G (13)	USC Furnace G	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12
1H	USC Furnace H	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1H (13)	USC Furnace H	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1J	USC Furnace J	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1J (13)	USC Furnace J	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12
1K	USC Furnace K	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	6.74 11.28 0.94 0.94 0.94 0.11 1.01	29.52 49.41 4.12 4.12 4.12 0.48 4.44	6, 12, 13	12, 13, 14	11, 12, 13
1K (13)	USC Furnace K	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1L	USC Furnace L	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	6.74 11.28 0.94 0.94 0.94 0.11 1.01	29.52 49.41 4.12 4.12 4.12 0.48 4.44	6, 12, 13	12, 13, 14	11, 12, 13
1L (13)	USC Furnace L	CO (9) NO _x PM ₁₀ SO ₂ VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44	12	12, 14	11, 12
1M	USC Furnace M	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1M (13)	USC Furnace M	CO NO _x PM ₁₀ SO ₂ VOC	20.36 27.30 1.84 0.15 1.33	89.19 119.58 8.07 0.67 5.84	6, 12, 13	12, 13, 14	11, 12, 13

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1N	USC Furnace N	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	10.40 17.40 1.45 1.45 1.45 0.17 1.56	45.54 76.21 6.35 6.35 6.35 0.75 6.85	6, 12, 13	12, 13, 14	11, 12, 13
1N (13)	USC Furnace N	CO NO _x PM ₁₀ SO ₂ VOC	20.36 27.30 1.84 0.15 1.33	89.19 119.58 8.07 0.67 5.84	6, 12, 13	12, 13, 14	11, 12, 13
3A	VMR Furnace A	CO (9) NO _x PM PM2.5 PM10 SO ₂ VOC	4.54 7.60 0.63 0.63 0.63 0.07 0.68	19.89 33.30 2.77 2.77 2.77 0.33 2.99	6, 12, 13	12, 13, 14	11, 12, 13
3A (13)	VMR Furnace A	CO (9) NO _x PM ₁₀ SO ₂ VOC	7.28 8.67 0.66 0.05 0.48	31.90 37.98 2.89 0.24 2.09	12	12, 14	11, 12

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
3B	VMR Furnace B	CO (9) NO _x PM PM _{2.5} PM ₁₀ SO ₂ VOC	4.54 7.60 0.63 0.63 0.63 0.07 0.68	19.89 33.30 2.77 2.77 2.77 0.33 2.99	6, 12, 13	12, 13, 14	11, 12, 13
3B (13)	VMR Furnace B	CO (9) NO _x PM ₁₀ SO ₂ VOC	7.28 8.67 0.66 0.05 0.48	31.90 37.98 2.89 0.24 2.09	12	12, 14	11, 12
4A	HP Steam Boiler A	CO NO _x PM ₁₀ SO ₂ SO ₃ VOC	23.65 94.63 23.14 284.48 10.33 1.56	103.59 414.46 101.33 1246.04 25.24 6.78	1, 5, 8	5, 8	8, 11
4B	HP Steam Boiler B	CO NO _x PM ₁₀ SO ₂ VOC	23.65 53.50 2.14 0.18 1.56	103.59 234.32 9.37 0.78 6.78	8	8	8, 11

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
4C	HP Steam Boiler C	CO NO _x PM ₁₀ SO ₂ VOC	23.65 53.50 2.14 0.18 1.56	103.59 234.32 9.37 0.78 6.78	8	8	8, 11
4D	HP Steam Boiler D	CO NO _x PM ₁₀ SO ₂ VOC	23.65 53.50 2.14 0.18 1.56	103.59 234.32 9.37 0.78 6.78	8	8	8, 11
5A	Steam Superheater A	CO (9) NO _x PM PM _{2.5} PM ₁₀ SO ₂ VOC	5.22 8.74 0.73 0.73 0.73 0.09 0.79	22.86 38.26 3.19 3.19 3.19 0.38 3.44			11
5A (13)	Steam Superheater A	CO NO _x PM ₁₀ SO ₂ VOC	5.25 6.25 0.47 0.04 0.34	22.98 27.36 2.08 0.17 1.50			11
5B	Steam Superheater B	CO (9)	5.22	22.86			11

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		NO _x	8.74	38.26			
		PM	0.73	3.19			
		PM _{2.5}	0.73	3.19			
		PM ₁₀	0.73	3.19			
		SO ₂	0.09	0.38			
		VOC	0.79	3.44			
5B (13)	Steam Superheater B	CO	5.25	22.98			11
		NO _x	6.25	27.36			
		PM ₁₀	0.47	2.08			
		SO ₂	0.04	0.17			
		VOC	0.34	1.50			
6	HDA Feed Heater	CO	7.08	31.00	16	14, 16	16
		NO _x	8.42	36.90			
		PM ₁₀	0.64	2.80			
		SO ₂	0.05	0.23			
		VOC	0.46	2.03			
7	HDA Recycle Heater	CO	0.49	2.15		14	
		NO _x	0.59	2.56			
		PM ₁₀	0.04	0.19			
		SO ₂	0.01	0.02			
		VOC	0.03	0.14			
8	Dryer Regeneration Heater	CO	1.61	7.05			
		NO _x	1.92	8.39			
		PM ₁₀	0.15	0.64			
		SO ₂	0.01	0.05			
		VOC	0.11	0.46			
8A	Cat. Reactivation Furnace	CO	2.12	9.30			
		NO _x	2.53	11.07			

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM ₁₀ SO ₂ VOC	0.19 0.02 0.14	0.84 0.07 0.61			
9A	South Decoking Cyclone	CO (10) PM PM _{2.5} PM ₁₀ VOC	1932.94 11.63 3.58 3.58 0.05	135.80 1.37 0.43 0.43 0.02	7, 12	4, 7, 12	7, 12
9A (13)	Decoking Cyclone	CO (10) PM PM ₁₀ VOC	1674.80 9.91 3.05 0.03	80.06 0.80 0.25 0.02	7, 12	4, 7, 12	7, 12
9B	North Decoking Cyclone	CO (10) PM PM _{2.5} PM ₁₀ VOC	1999.16 12.47 3.84 3.84 0.04	133.80 1.35 0.42 0.42 0.02	7, 12	4, 7, 12	7, 12
9B (13)	Decoking Cyclone	CO (10) PM PM ₁₀ VOC	906.86 6.82 2.01 0.03	66.37 0.66 0.21 0.02	7, 12	4, 7, 12	7, 12
10	Hot Flare	CO NO _x SO ₂ VOC	1092.65 209.76 64.68 369.22	37.00 8.21 2.51 6.94	8, 10, 16, 23, 25	8, 10, 16, 23, 25	8, 10, 16
11	Cold Flare	CO NO _x	100.84 19.39	13.84 2.92	8, 10, 23, 25	8, 10, 23, 25	8, 10

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		SO ₂ VOC	0.08 76.88	0.13 2.61			
12	Cooling Tower (5)	VOC PM PM ₁₀ PM _{2.5}	2.92 4.05 4.05 1.20	12.79 15.33 15.33 4.55	19	19, 27	
12 (13)	Cooling Tower (5)	VOC PM PM ₁₀ PM _{2.5}	2.92 34.86 33.37 5.63	12.79 105.75 103.54 20.78	19	19	
12B	Cooling Tower (5)	VOC	2.02	3.72	19	19, 27	
		PM	1.20	4.54			
		PM ₁₀	1.20	4.54			
		PM _{2.5}	0.36	1.35			
13C	Carbon Canisters in Series	VOC	0.06	0.01	26	26	26
13C (13)	Carbon Canisters in Series	VOC	0.04	0.01	26	26	26
16	Naphtha Feedstock Day Tank	VOC	1.52	2.52	8, 18	8, 18, 14	8
17	Kerosene Feedstock Day Tank	VOC	1.52	2.47	8, 18	8, 18, 14	8
18	Light Fuel Oil Tank	VOC	3.07	4.30		18, 14	
19	Raw Pyrolysis Gasoline Tank	VOC	1.74	4.90	18	18, 14	
20A	Heavy Oil Fuel Tank	VOC	4.30	5.10		18, 14	
20B	Heavy Oil Fuel Tank	VOC	4.30	5.10		18, 14	

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
23A	Benzene Tank	VOC	0.17	0.31	9, 18	9, 18, 14	9
24	HDA Tank	VOC	1.45	3.94	10, 18	10, 18, 14	10
30A	Feedstock Tank	VOC	3.37	10.01	10, 18	10, 18, 14	10
30B	Feedstock Tank	VOC	3.37	10.04	10, 18	10, 18, 14	10
30C	Feedstock Tank	VOC	3.39	10.13	10, 18	10, 18, 14	10
31	Second Stage Feed Heater	CO NO _x PM ₁₀ SO ₂ VOC	1.27 1.51 0.11 0.01 0.08	5.55 6.60 0.50 0.04 0.36		14	
32	Lube Oil Tank	VOC	16.27	0.15	10, 18	10, 18, 14	10
33	Wash Oil Tank	VOC	0.23	0.43	10, 18	10, 18, 14	10
39A	Spent Caustic Gasoline Wash Tank	VOC	0.64	1.07	9, 10, 18	9, 10, 18, 14	9, 10
39B	Spent Caustic Gasoline Wash Tank	VOC	0.41	0.85	9, 10, 18	9, 10, 18, 14	9, 10
40	Recovered Oil Tank	VOC	0.30	0.87	9, 18	9, 18, 14	9
42	Methanol Tank	VOC	4.08	0.04	10	10, 18, 14	10
43	Fuel Oil Truck Loading	VOC	29.63	7.04		18, 14	
50	Spent Caustic Wastewater	VOC	0.03	0.06	9, 10, 18	9, 10, 18, 14	9, 10
51	Spent Caustic Wastewater	VOC	0.06	0.12	9, 10, 18	9, 10, 18, 14	9, 10
52	Wastewater Tank	VOC	0.75	1.15	9, 18	9, 18, 14	9
53	Slop Oil Tank	VOC	0.26	0.77	10, 18	10, 18, 14	10

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
55	Hot Water Belt Tank	VOC	1.01	3.19	10, 18	10, 18, 14	10
AC-1	Air Compressor Engine No. 1 (8)	CO NO _x PM ₁₀ SO ₂ VOC	2.74 3.03 0.16 0.97 0.12	2.05 2.27 0.12 0.73 0.09		14	
AC-2	Air Compressor Engine No. 2 (8)	CO NO _x PM ₁₀ SO ₂ VOC	2.74 3.03 0.16 0.97 0.12	2.05 2.27 0.12 0.73 0.09		14	
F2602A	Vehicle Diesel Tank	VOC	0.70	0.01		18	
F2603	Vehicle Gasoline Tank	VOC	51.22	1.26		18	
FA1665	Diesel Tank	VOC	0.22	0.01		18	
FU-1	EMACT Process Fugitive (5)	VOC	23.13	101.36	8, 9, 10, 15, 21, 22	9, 10, 21, 22	9, 10, 21
FU-2	HON Process Fugitive (5)	VOC	0.93	4.08	8, 9, 10, 15, 21, 22	9, 10, 21, 22	9, 10, 21
FU-3	Process Fugitive (5)	VOC (11) VOC (12)	17.90 13.73	78.41 60.13	9, 10, 15, 21, 22	9, 10, 21, 22	9, 10, 21
FU-4	NESHAP FF Fugitive (5)	VOC	0.02	0.10	8, 9, 10, 20	9, 10, 20	9, 10
FUG	Fugitive Emissions	VOC	7.96	34.87	9, 10, 15, 21, 22	9, 10, 21, 22	9, 10, 21
FWDIESELA	Firewater Diesel Tank	VOC	0.02	0.01			
FWDIESELB	Firewater Diesel Tank	VOC	0.02	0.01			
FWDIESELC	Firewater Diesel Tank	VOC	0.02	0.01			

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
FWDIESELD	Firewater Diesel Tank	VOC	0.02	0.01			
J-2019-A	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13			
J-2019-B	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13			
J-2019-C	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13			
J-2019-D	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13			
L-1697	Emergency Generator (6)	CO NO _x PM ₁₀ SO ₂ VOC	0.85 10.37 0.06 1.65 0.02	0.02 0.27 0.01 0.04 0.01			
PAINT	Painting	VOC	7.39	4.81			

Major NSR Summary Table

Permit Number: 4682B and PSDTX761M3					Issuance Date: 04/16/2014		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
WWC-1	Wastewater Collection	VOC	2.00	0.32	9	9, 14	9
WWC-1 (13)	Wastewater Collection	VOC	1.37	0.22	9	9, 1 4	9

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO - carbon monoxide
 NO_x - total oxides of nitrogen
 PM - particulate matter
 PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
 PM_{2.5} - total particulate matter equal to or less than 2.5 microns in diameter
 SO₂ - sulfur dioxide
 SO₃ - sulfur trioxide
 VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) 52 hours per rolling twelve months of operation
- (7) 250 hours per rolling twelve months of operation
- (8) 1,500 hours per rolling twelve months of operation
- (9) PSDTX761M1 pollutant
- (10) PSDTX761M2 pollutant
- (11) Pre-control emissions
- (12) Post-control emissions
- (13) The indicated emission rate limits apply to this EPN until the modifications represented in the amendment application received under PI-1, March 1, 2013, are completed consistent with the construction schedule required by General Condition No. 2 of this permit. The emission rate limits indicated for this EPN without this footnote reference apply upon completion of the described modifications.

Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Hrs/day 24 Days/week 7 Weeks/year 52

Major NSR Summary Table

Permit Number: Permit: 18358 and PSDTX732M2					Issuance Date: 05/30/2013		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
Case I: Natural Gas or Plant Gas Firing; Duct Burner Fired							
44	37 MW Gas Turbine and 223 MMBtu/hr Fired Duct Burner	VOC	7.4	28	2, 6, 7, 10, 11, 12	2, 7, 11, 14	2, 7, 8, 9, 15
		NOX	153.1	601			
		SO2	0.54	2.2			
		PM10	5.2	23			
		CO	21.1	88			
Case II: Natural Gas or Plant Fuel Gas Firing; Duct Burner Unfired							
44	37 MW Gas Turbine	VOC	7	26	2, 6, 7, 10, 11, 12	2, 7, 11, 14	2, 7, 8, 9, 15
		NOX	130	499			
		SO2	0.4	1.5			
		PM10	3.9	17			
		CO	11	44			
Case III: Fuel Oil Firing; Duct Burner Fired							
44	37 MW Gas Turbine and 223 MMBtu/hr Fired Duct Burner	VOC	7.4	28	2, 6, 7, 10, 11, 12	2, 7, 11, 14	2, 7, 8, 9, 15
		NOX	167.7	675			
		SO2	112.2	455			
		PM10	20	88			
		CO	18.4	77			
		H2SO4	5.6	20.3			
		Be	0.0093	0.038			
		As	0.037	0.15			
		Cd	0.037	0.15			

		Cr	0.037	0.15			
		F	0.037	0.15			
		Pb	0.037	0.15			
		Hg	0.037	0.15			
		Mn	0.037	0.15			
		Ni	0.037	0.15			
		Se	0.037	0.15			
		V	0.037	0.15			
Case IV: Fuel Oil Firing; Duct Burner Unfired							
44	37 MW Gas Turbine	VOC	7	26	2, 6, 7, 10, 11, 12	2, 7, 11, 14	2, 7, 8, 9, 15
		NOX	137	539			
		SO2	80.7	315			
		PM10	17	75			
		CO	11	44			
		H2SO4	5	17.5			
		Be	0.0067	0.026			
		As	0.027	0.11			
		Cd	0.027	0.11			
		Cr	0.027	0.11			
		F	0.027	0.11			
		Pb	0.027	0.11			
		Hg	0.027	0.11			
		Mn	0.027	0.11			
		Ni	0.027	0.11			
		Se	0.027	0.11			
		V	0.027	0.11			

1) Emission point identification - either specific equipment designation or emission point number from a plot plan.

2) Specific point source names. For fugitive sources, use an area name or fugitive source name.

3) VOC - volatile organic compounds as defined in 30 TAC 101.1

IOC-U - inorganic compounds (unspeciated)

NOX - total oxides of nitrogen

SO2 - sulfur dioxide

PM - particulate matter, suspended in the atmosphere including PM10

PM10 - particulate matter equal to or less than 10 microns in diameter. Where PM is listed, it shall be assumed that no particle greater than 10 microns is emitted.

CO - carbon monoxide

Be - beryllium

As - arsenic

F - fluoride

Pb - lead

Cd - cadmium

Cr - chromium

Hg - mercury

Mn - manganese

Ni - nickel

Se - selenium

V - vanadium

4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule

24 Hrs/day	7 Days/week	52 Weeks/year	8760 Hrs/year
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** Compliance with annual emission limits is based on a rolling 12-month period.

Major NSR Summary Table

Permit Numbers: GHGPSDTX32					Issuance Date: 4/14/2014		
Emission Point Number (EPN)	Source Name	Air Contaminant Name	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			TPY ¹	TPY CO ₂ e ^{2,3}	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1A	USC Furnace A – Cracking Furnace	CO ₂ CH ₄ N ₂ O	93,838 5.5 1.1	94,303	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1B	USC Furnace B – Cracking Furnace	CO ₂ CH ₄ N ₂ O	93,838 5.5 1.1	94,303	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1C	USC Furnace C – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1D	USC Furnace D – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1E	USC Furnace E – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1F	USC Furnace F – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1G	USC Furnace G – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1H	USC Furnace H – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1J	USC Furnace J – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1K	USC Furnace K – Cracking Furnace	CO ₂ CH ₄ N ₂ O	93,838 5.5 1.1	94,303	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C

Major NSR Summary Table

Permit Numbers: GHGPSDTX32					Issuance Date: 4/14/2014		
Emission Point Number (EPN)	Source Name	Air Contaminant Name	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			TPY ¹	TPY CO ₂ e ^{2,3}	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1 L	USC Furnace L – Cracking Furnace	CO ₂ CH ₄ N ₂ O	93,838 5.5 1.1	94,303	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1M	USC Furnace M – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
1N	USC Furnace N – Cracking Furnace	CO ₂ CH ₄ N ₂ O	144,751 8.4 1.7	145,468	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
3A	VMR Furnace A – Cracking Furnace	CO ₂ CH ₄ N ₂ O	63,241 3.7 0.7	63,542	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
3B	VMR Furnace B – Cracking Furnace	CO ₂ CH ₄ N ₂ O	63,241 3.7 0.7	63,542	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
5A	Steam Superheater A	CO ₂ CH ₄ N ₂ O	72,675 4.2 0.8	73,018	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
5B	Steam Superheater B	CO ₂ CH ₄ N ₂ O	72,675 4.2 0.8	73,018	III.A.1, III.B, V.A, V.B, V.C, V.D, V.E, V.F, V.G	III.A.1, III.B, IV.A, V.A, V.D	V.B, V.C
9A 9B	South & North Decoking Cyclones – Decoking Pots	CO ₂	1,270 ⁴	1,270 ⁴	III.A.1, III.B	III.A.1, III.B, IV.A	
FUG	Fugitive Process Emissions	CH ₄	No Emission Limit Established ⁵	No Emission Limit Established ⁵	III.A.2	III.A.2, IV.A	
10 DBN MSS	Elevated Flare – MSS	CO ₂ CH ₄ N ₂ O	3,866 13.3 0.01	4,201	III.A.3	III.A.3, IV.A	

Major NSR Summary Table

Permit Numbers: GHGPSDTX32					Issuance Date: 4/14/2014		
Emission Point Number (EPN)	Source Name	Air Contaminant Name	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			TPY ¹	TPY CO ₂ e ^{2,3}	Special Condition/Application Information	Special Condition/Applicatio n Information	Special Condition/Applicatio n Information
Totals ⁶		CO ₂ CH ₄ N ₂ O	1,955,080 145 23	CO ₂ e 1,965,475			

Footnotes:

- (1) The GHG Mass Basis TPY limits are informational only and do not constitute an enforceable limit.
- (2) Compliance with the annual emission limits (tons per year) is based on a 12-month rolling total, to be updated the last day of the following month. The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions from the facility during all operations and include MSS activities.
- (3) Global Warming Potentials (GWP): CH₄ = 25, N₂O = 298
- (4) The decoke pot (EPN: 9A and 9B) emissions are estimated to be 1,270 TPY CO₂/CO₂e for both decoke pots combined.
- (5) Fugitive process emissions from FUG are estimated to be 18.4 TPY of CH₄, and 460 TPY CO₂e. In lieu of an emission limit, the emissions will be limited by implementing a design/work practice standard as specified in the permit.
- (6) Total emissions include the PTE for fugitive emissions. Totals are given for informational purposes only and do not constitute emission limits



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT



*A Permit Is Hereby Issued To
Equistar Chemicals, LP
Authorizing the Construction and Operation of
Chemical Manufacturing*

Located at Corpus Christi, Nueces County, Texas

LATITUDE 27° 48' 45" LONGITUDE 097° 35' 30"

Permit: 83864 and PSDTX1120

Issuance Date : November 2, 2012

Renewal Date: November 2, 2022


For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

SPECIAL CONDITIONS

Permit Numbers 83864 and PSDTX1120

Maintenance, Startup, and Shutdown

1. This permit authorizes the emissions from planned maintenance, startup, and shutdown (MSS) activities and associated facilities identified in the permit application, Form PI-1, dated January 4, 2008, included in attachments A, B, and C, only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," for the MSS activities summarized in the MSS Activity Summary (Attachment C) attached to this permit. The facilities covered by this permit are authorized to emit subject to the emission rate limits on the maximum allowable emission rates table (MAERT) and other operating conditions specified in this permit.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the manufacturing sites. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall be limited to the estimated emissions for each type of activity and the basis for that emission estimate.

Routine maintenance activities, as identified in Attachment B may be tracked through work orders or equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of each planned MSS activity not identified in Attachments A or B and the emissions associated with it shall be recorded and include at least the following information:

- A. The process unit at which emissions from the MSS activity occurred, including the emission point number from the MAERT and common name of the process unit;
- B. The type of planned MSS activity and the reason for the planned activity.
- C. The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- D. The date and time of the MSS activity and its duration;
- E. The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

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Planned startup and shutdown emissions due to the activities identified in this condition are authorized from facilities and emission points identified in Attachment D in other construction permits at the site provided the facility and emissions are compliant with the respective MAERT and special conditions of their permits, or with Special Condition (SC) No. 11 of this permit.

2. All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.
3. Process units and facilities, with the exception of those identified in SC Nos. 6, 7, and 9, and in Attachment A, shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements:
 - A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere. Equipment that only contains material that is liquid with volatile organic compounds (VOC) partial pressure less than 0.50 psia at the highest of the actual temperature or 95°F may be opened to atmosphere and drained in accordance with Paragraph C of this special condition. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.
 - B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psi at either the actual temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.
 - C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel or closed liquid recovery system unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour after completion of draining.
 - D. If the VOC partial pressure is greater than 0.50 psi at the actual temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air

SPECIAL CONDITIONS

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contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design.

The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions calculated using the methods that were used to determine allowable emissions for the permit application.

- (1) For MSS activities identified as routine maintenance activities in SC No. 1, the following option may be used in lieu of item (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.
- (2) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of SC No. 4. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. Documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.

E. Gases and vapors with VOC partial pressure greater than 0.50 psi may be vented directly to atmosphere if all the following criteria are met:

- (1) It is not technically practicable to depressurize or degas, as applicable, into the process;

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- (2) There is not an available connection to a plant control system (flare); and
- (3) There is no more than 50 lbs of air contaminant to be vented to atmosphere during shutdown or start-up, as applicable.

Except when identified for an activity on SC No. 1, all instances of venting directly to atmosphere per SC No. 3 must be documented when occurring as part of any MSS activity.

- 4. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.
 - A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:
 - (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

$$\text{VOC Concentration} = \text{Concentration as read from the instrument} * \text{RF}$$

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.
 - (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least five minutes, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.
 - B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

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- (1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.
- (2) The tube is used in accordance with the manufacturer's guidelines.
- (3) At least two samples taken at least five minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000* mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

C. Lower explosive limit measured with a lower explosive limit detector.

- (1) The detector shall be calibrated no more than 30 days prior to use with a certified pentane gas standard at 25 percent of the LEL for pentane and maintained in accordance with manufacturer's specifications. Records of the calibration date and calibration result (pass/fail) shall be maintained.
 - (2) A functionality test shall be performed on each detector within 24 hours of use with a certified gas standard at 25% of the LEL for pentane. The LEL monitor shall read no lower than 90 percent of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.
 - (3) A certified methane gas standard equivalent to 25 percent of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95 percent of that for pentane.
5. This condition applies only to piping and components subject to leak detection and repair monitoring requirements identified in other air permits. Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the removal of a

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component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

- A. a cap, blind flange, plug, or second valve must be installed on the line or valve; or
 - B. the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once at the end of the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings 500 ppmv above background and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
6. This permit authorizes emissions associated with the storage tanks identified in the permit application, Form PI-1, dated January 4, 2008, during planned floating roof landings. Tank roofs may only be landed for changes of tank service or tank inspection/maintenance as identified in the permit application. Emissions from change of service tank landings, for which the tank is not cleaned and degassed, shall not exceed 10 tons of VOC in any rolling 12-month period. Tank roof landings include all operations when the tank floating roof is on its supporting legs. These emissions are subject to the maximum allowable emission rates indicated on the maximum allowable emission rates table. The following requirements apply to tank roof landing.
- A. The tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank has been drained to the maximum extent practicable without entering the tank. Liquid level may be maintained steady for a period of up to two hours if necessary to allow for valve lineups and pump changes necessary to drain the tank. This requirement does not apply where the vapor under a floating roof is routed to control or a controlled recovery system during this process.
 - B. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psi at 95°F, tank refilling or degassing of the vapor space under the landed floating roof must begin within 24 hours after the tank has been drained unless the vapor under the floating roof is routed to control or a controlled recovery system during this period. The tank shall not be opened except as necessary to set up for

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degassing and cleaning. Floating roof tanks with liquid capacities less than 100,000 gallons may be degassed without control if the VOC partial pressure of the standing liquid in the tank has been reduced to less than 0.044 psia prior to ventilating the tank. Controlled degassing of the vapor space under landed roofs shall be completed as follows:

- (1) Any gas or vapor removed from the vapor space under the floating roof must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when degassing to the control device or controlled recovery system.
- (2) The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
- (3) A volume of purge gas equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in SC No. 4.
- (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
- (5) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.

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- C. The tank shall not be opened or ventilated without control, except as allowed by (1) or (2) below, until one of the criteria in part D of this condition is satisfied.
- (1) Minimize air circulation in the tank vapor space.
 - a. One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank.
 - b. Access points shall be closed when not in use.
 - (2) Minimize time and VOC partial pressure.
 - a. The VOC partial pressure of the liquid remaining in the tank shall not exceed 0.044 psi as documented by the method specified in part D.(1) of this condition;
 - b. Blowers may be used to move air through the tank without emission control at a rate not to exceed 3000 cfm for no more than 168 hours. All standing liquid shall be removed from the tank during this period; and
 - c. Records shall be maintained of the blower circulation rate, the duration of uncontrolled ventilation, and the date and time all standing liquid was removed from the tank.
- D. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.044 psia. These criteria shall be demonstrated in any one of the following ways:
- (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.044 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.

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- (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
 - a. Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR Part 435 Subpart A, Appendix 1.
 - b. Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use Methods 8260B or 5030 with 8015 from SW-846).
 - c. Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1,000 ppmv through the procedure in SC No. 4.
- (3) No standing liquid verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.

- E. Tanks shall be refilled as rapidly as practicable until the roof is off its legs, unless the vapor space below the tank roof is directed to a control device when the tank is refilled until the roof is floating on the liquid. The control device used and the method and locations used to connect the control device shall be recorded. All vents from the tank being filled must exit through the control device.
- F. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information:
 - (1) the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;
 - (2) the reason for the tank roof landing;
 - (3) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
 - a. the roof was initially landed,

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- b. all liquid was pumped from the tank to the extent practical,
 - c. start and completion of controlled degassing, and total volumetric flow,
 - d. all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to 0.044 psia,
 - e. if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,
 - f. refilling commenced, liquid filling the tank, and the volume necessary to float the roof, and
 - g. tank roof off supporting legs, floating on liquid.
 - (4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events c and g with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application.
7. Fixed-roof storage tanks are subject to the requirements of SC No. 6C and D. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of SC No. 6B(1) through 6B(4). Records shall be maintained per SC No. 6F(3)c through e, and 6F(4).
8. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:
- A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document the VOC partial pressure. After each liquid transfer, identify the liquid, the volume transferred, and its VOC partial pressure.
 - B. If vacuum pumps or blowers are operated when liquid is in or being transferred to the truck, the following requirements apply:
 - (1) If the VOC partial pressure of the liquid in or being transferred to the truck is greater than 0.50 psi at 95°F, the vacuum/blower exhaust shall be routed to a control device or a controlled recovery system.

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- (2) Equip fill line intake with a “duckbill” or equivalent attachment if the hose end cannot be submerged in the liquid being collected.
- (3) A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.
 - a. For each liquid transfer made with the vacuum operating, record the duration of any periods when air may have been entrained with the liquid transfer. The reason for operating in this manner and whether a “duckbill” or equivalent was used shall be recorded. Short, incidental periods, such as those necessary to walk from the truck to the fill line intake, do not need to be documented.
 - b. If the vacuum truck exhaust is controlled with a control device other than an engine or oxidizer, VOC exhaust concentration upon commencing each transfer, at the end of each transfer, and at least every hour during each transfer shall be recorded, measured using an instrument meeting the requirements of SC No. 4.A or B.
- C. Record the volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.
- D. The permit holder shall determine the vacuum truck emissions each month using the daily vacuum truck records and the calculation methods utilized in the permit application. If records of the volume of liquid transferred for each pick-up are not maintained, the emissions shall be determined using the physical properties of the liquid vacuumed with the greatest potential emissions. Rolling 12-month vacuum truck emissions shall also be determined on a monthly basis.
- E. If the VOC partial pressure of all the liquids vacuumed into the truck is less than 0.10 psi, this shall be recorded when the truck is unloaded or leaves the plant site and the emissions may be estimated as the maximum potential to emit for a truck in that service as documented in the permit application. The recordkeeping requirements in A through D of this permit condition do not apply.
- 9. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.
 - A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum effective May 1, 2013. This requirement does not apply to tanks/vessels

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that only vent to atmosphere when being filled, sampled, gauged, or when removing material.

- B. These tanks/vessels must be covered and equipped with fill pipes that discharge within six inches of the tank/vessel bottom.
 - C. These requirements do not apply to vessels storing less than 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.
 - D. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12-month period. This record must be updated by the last day of the month following. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. Filling emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."
 - E. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psi at 95°F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application.
10. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.
11. All permanent facilities must comply with all operating requirements, limits, and representations in the permits identified in Attachment D during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for emissions from routine emission points are identified below.
- A. Combustion units at this site, with the exception of flares, are exempt from nitrogen oxides (NO_x) and carbon monoxide (CO) operating requirements identified in special conditions in other air permits during planned startup and shutdown if the following criteria are satisfied.

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- (1) The maximum allowable emission rates in the permit authorizing the facility are not exceeded.
 - (2) The startup period does not exceed 8 hours in duration and the firing rate does not exceed 75 percent of the design firing rate. The time it takes to complete the shutdown does not exceed 4 hours.
 - (3) Control devices are started and operating properly when venting a waste gas stream.
 - B. The limits identified in Permit No. 18358 and PSDTX732M1, SC No. 10, shall apply during start-up and shutdown activities of the gas-fired turbine identified as EPN 44.
 - C. A record shall be maintained indicating that the start and end times of each of the activities identified above occur and documentation that the requirements for each have been satisfied.
12. Control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating plant process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

A. Carbon Adsorption System (CAS).

- (1) The CAS shall consist of two carbon canisters in series with adequate carbon supply for the emission control operation.
- (2) The CAS shall be sampled downstream of the first can and the concentration recorded at least once every hour of CAS run time to determine breakthrough of the VOC. The sampling frequency may be extended using either of the following methods:
 - a. It may be extended to up to 30 percent of the minimum potential saturation time for a new can of carbon. The permit holder shall maintain

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records including the calculations performed to determine the minimum saturation time.

- b. The carbon sampling frequency may be extended to longer periods based on previous experience with carbon control of a MSS waste gas stream. The past experience must be with the same VOC, type of facility, and MSS activity. The basis for the sampling frequency shall be recorded. If the VOC concentration on the initial sample downstream of the first carbon canister following a new polishing canister being put in place is greater than 100 ppmv above background, it shall be assumed that breakthrough occurred while that canister functioned as the final polishing canister and a permit deviation shall be recorded.
- (3) The method of VOC sampling and analysis shall be by detector meeting the requirements of SC No. 4.
 - (4) Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv above background. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within four hours. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above specified time frame.
 - (5) Records of CAS monitoring shall include the following:
 - (a) Sample time and date;
 - (b) Monitoring results (ppmv); and
 - (c) Canister replacement log.
 - (6) Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent of the minimum potential saturation time. The permit holder shall maintain records for these systems, including the calculations performed to determine the saturation time. The time limit on carbon canister service shall be recorded and the expiration date attached to the carbon can.

B. Thermal Oxidizer.

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- (1) The thermal oxidizer firebox exit temperature shall be maintained at not less than 1400°F and waste gas flows shall be limited to assure at least a 0.5 second residence time in the fire box while waste gas is being fed into the oxidizer.
- (2) The thermal oxidizer exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurements shall be made at intervals of six minutes or less and recorded at that frequency.

The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^\circ\text{C}$.

- (3) The portable thermal oxidizer firebox exit temperature may be maintained at a temperature less than 1400°F if stack testing supports a destruction efficiency of at least 98.0 percent at the lower temperature. The stack test shall have been performed in the past twelve months and documentation shall be maintained to demonstrate compliance with this special condition.

C. Internal Combustion Engine.

- (1) The internal combustion engine shall have a VOC destruction efficiency of at least 99 percent.
- (2) The engine must have been stack tested with butane to confirm the required destruction efficiency within the past 12 months. VOC shall be measured in accordance with the applicable EPA Reference Method during the stack test and the exhaust flow rate may be determined from measured fuel flow rate and measured oxygen concentration. A copy of the stack test report shall be maintained with the engine. There shall also be documentation of acceptable VOC emissions following each occurrence of engine maintenance which may reasonably be expected to increase emissions including oxygen sensor replacement and catalyst cleaning or replacement. Stain tube indicators specifically designed to measure VOC concentration shall be acceptable for this documentation, provided a hot air probe or equivalent device is used to prevent error due to high stack temperature, and three sets of concentration measurements are made and averaged. Portable VOC analyzers meeting the requirements of SC 4A are also acceptable for this documentation.
- (3) The engine shall be operated and monitored as specified below.

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- a. If the engine is operated with an oxygen sensor-based air-to-fuel ratio (AFR) controller, documentation for each AFR controller that the manufacturer's or supplier's recommended maintenance has been performed, including replacement of the oxygen sensor as necessary for oxygen sensor-based controllers shall be maintained with the engine. The oxygen sensor shall be replaced at least quarterly in the absence of a specific written recommendation. The engine must have been stack tested within the past 12 months in accordance with part (2) of this condition.

The test period may be extended to 24 months if the engine exhaust is sampled once an hour when waste gas is directed to the engine using a detector meeting the requirements of SC No. 4.A. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the engine. The concentrations shall be recorded and the MSS activity shall be stopped as soon as possible if the VOC concentration exceeds 100 ppmv above background.

- b. If an oxygen sensor-based AFR controller is not used, the engine exhaust to atmosphere shall be monitored continuously and the VOC concentration recorded at least once every 15 minutes when waste gas is directed to the engine. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the engine. The method of VOC sampling and analysis shall be by detector meeting the requirements of SC No. 4.A. An alarm shall be installed such that an operator is alerted when outlet VOC concentration exceeds 100 ppmv above background. The MSS activity shall be stopped as soon as possible if the VOC concentration exceeds 100 ppmv above background for more than one minute. The date and time of all alarms and the actions taken shall be recorded. The engine must have been stack tested within the past 24 months in accordance with part (2) of this condition.

D. The plant flare system.

- (1) The heating value and velocity requirements in 40 CFR § 60.18 shall be satisfied during operations authorized by this permit.
- (2) The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a

SPECIAL CONDITIONS

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thermal couple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

- (3) The average net heating value over a one-hour block period shall be calculated and recorded to demonstrate compliance with the minimum net heating value requirements. The permit holder shall use available monitoring data (such as flow rates), process knowledge (such as volumes and pressures), and engineering calculations to demonstrate compliance with the requirements of this condition. In the event assist gas is needed to maintain the minimum net heating value, natural gas or fuel gas shall be added to the waste stream.
- E. A liquid scrubbing system may be used upstream of carbon adsorption. A single carbon can or a liquid scrubbing system may be used as the sole control device if the requirements below are satisfied.
- (1) The exhaust to atmosphere shall be monitored continuously and the VOC concentration recorded at least once every 15 minutes when waste gas is directed to the scrubber.
 - (2) The method of VOC sampling and analysis shall be by detector meeting the requirements of SC No. 4.A.
 - (3) An alarm shall be installed such that an operator is alerted when outlet VOC concentration exceeds 100 ppmv above background. The MSS activity shall be stopped as soon as possible when the VOC concentration exceeds 100 ppmv above background for more than one minute. The date and time of all alarms and the actions taken shall be recorded.
- F. A closed loop refrigerated vapor recovery system.
- (1) The vapor recovery system shall be installed on the facility to be degassed using good engineering practice to ensure air contaminants are flushed from the facility through the refrigerated vapor condensers and back to the facility being degassed. The vapor recovery system and facility being degassed shall be enclosed except as necessary to insure structural integrity (such as roof vents on a floating roof tank).
 - (2) The method of VOC sampling and analysis shall be by detector meeting the requirements of SC No. 4.A.

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- (3) The quantity of liquid recovered from the tank vapors and the tank pressure shall be monitored and recorded each hour. The liquid recovered must increase with each reading and the tank pressure shall not exceed one inch water pressure while the system is operating.

Recordkeeping Requirements

13. All the following records shall be maintained electronically or in hard copy format for at least five years and shall be used to demonstrate compliance with the special conditions and the limits specified in the MAERT:
 - A. Records of the performance and the associated emissions of each planned MSS activity not identified in Attachments A or B, as specified in SC No. 1.
 - B. Records of depressurizing, emptying, degassing, and placing in service of process units and facilities, as specified in SC No. 3.
 - C. Records of instrument/detector measurements, calibrations and sampling, as specified in SC No. 4.
 - D. Records of leak monitoring, as specified in SC No. 5.
 - E. Records of planned tank roof landings and the associated emissions, as specified in SC No. 6.
 - F. Records of tank degassings and the associated emissions, as specified in SC No. 7.
 - G. Records of vacuum truck operations and emissions, as specified in SC No. 8.
 - H. Records of frac tank operations and emissions, as specified in SC No. 9.
 - I. Records of additional occurrences of MSS activities, as specified in SC No. 10.
 - J. Records of Attachment D activities, as specified in SC No. 11
 - K. Records of control device operations, as specified in SC No. 12.
14. With the exception of the maximum allowable emission rates table limits, these permit conditions become effective 180 days after this permit has been issued. During this period, monitoring and recordkeeping shall satisfy the requirements of SC Nos. 1.A through 1.D. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the

SPECIAL CONDITIONS

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quantity of air contaminants to be emitted shall be recorded. The permit holder may maintain abbreviated records of emissions from Attachment A and B activities as allowed in SC No. 1 rather than documenting all the information required by SC Nos. 1.A through D.

15. Planned maintenance activities must be conducted in a manner consistent with good practice for minimizing emissions, including the use of air pollution control equipment, practices and processes. All reasonable and practical efforts to comply with SC Nos. 1 through 14 must be used when conducting the planned maintenance activity, until the Commission determines that the efforts are unreasonable or impractical, or that the activity is an unplanned maintenance activity.

Dated: November 2, 2012

ATTACHMENT A

Inherently Low Emitting Activities

Permit Numbers 83864 and PSDTX1120

Activity	Emissions				
	VOC	NO _x	CO	PM	H ₂ S/SO ₂
Calibration/maintenance of process instrumentation	X				
Water washing empty drums, totes, and misc. small equipment	X				

Dated: November 2, 2012

ATTACHMENT B

Routine Maintenance Activities

Permit Numbers 83864 and PSDTX1120

Repair/replacement of components such as pumps, valves, and filters that may be isolated so that the process volume to be emptied and degassed to the atmosphere is less than 5 cubic feet.

Repair/replacement of facilities such as compressors and heat exchangers that may be isolated so that the process volume to be emptied and degassed to the atmosphere is less than 50 cubic feet.

Preparations of equipment for maintenance and the repair/replacement of equipment that requires purging of non-condensable hydrocarbons that are routed to a control device, and result in intermittent or indiscernible emissions that will not result in combined VOC emissions in excess of 10 lbs per event.

Replacement of analyzer filters/screens

Replacement of process filters/screens

Calibration of continuous emission monitoring system (CEMS) analyzers

Valve and piping maintenance/replacement

Spare pump startup – Heavy Liquid (HL) and Light Liquid (LL) service

Pipeline pigging

Compressor maintenance

Carbon replacement

Seal inspections and other tank inspection activities

Maintenance on LL pumps purged to slop or flare

Maintenance on HL pumps purged to slop or flare

Maintenance on HL pumps purged to open containers

Dated: November 2, 2012

ATTACHMENT C

MSS Activity Summary

Permit Numbers 83864 and PSDTX1120

Facilities	Description	Emissions Activity	EPN
BX001FL, 10 and 11	Flaring - MSS Process Equipment and Vessel Flaring Activities	MSS Venting to the flares (EPNs BX001FL, 10 and 11).	BX001FL, 10 and 11
Miscellaneous Process Equipment and Process Vessels	Atmospheric Venting - MSS Process Equipment and Vessel Venting, Draining, and Recovery	MSS Venting to the atmosphere.	MSS-ATM
All Tanks	MSS Tank Activities	Tank Degassing, Venting, and Refilling.	MSS-ATM
All Catalyst Process Equipment	MSS Catalyst Handling Activities	Atmospheric emissions of Catalyst Loading/unloading activities.	MSS-ATM
All Process Units	MSS Air Mover and Vacuum Truck Activities	Vacuum Truck Operations	MSS-ATM
All Process Units	MSS Frac Tank Usage	Frac Tank Operations	MSS-ATM
Process Equipment including heat exchangers, vacuum trucks, frac tanks, and miscellaneous process equipment.	MSS Cleaning Slab Activities	Hydroblasting of Miscellaneous Process Equipment	MSS-ATM
See Attachment A	Miscellaneous low emitting activities	See Attachment A	MSS-ATM
See Attachment B	Routine Maintenance Activities	See Attachment B	MSS-ATM

Dated: November 2, 2012

ATTACHMENT D

MSS Activity Summary

Permit Numbers 83864 and PSDTX1120

This permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: frac tanks, containers, vacuum trucks, facilities used for painting or abrasive blasting, portable control devices identified in Special Condition No. 12, and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned maintenance, startup, and shutdown (MSS) activities at the permanent site facilities listed in this Attachment, and (c) does not operate as a replacement for an existing authorized facility.

This permit authorizes MSS emissions from the permanent site facilities identified below. The headings for each group of facilities (Process Units, Tanks, etc) are used in the MSS Activity Summary to identify all facilities in the respective group.

Process Units

Description	EPN	Permit
Olefins Unit Fugitives- EMACT	FU-1	4682B
Olefins Unit Fugitives - HON	FU-2	4682B
Olefins Unit Fugitives - NESHAPS	FU-3	4682B
NESHAPS FF Stripper Fugitive	FU-4	4682B
BDU Fugitives	BX001FE	6745B

Heaters, Furnances, Boilers and Turbines

Description	EPN	Permit
USC Furnace A	1A	4682B
USC Furnace B	1B	4682B
USC Furnace C	1C	4682B
USC Furnace D	1D	4682B
USC Furnace E	1E	4682B
USC Furnace F	1F	4682B
USC Furnace G	1G	4682B
USC Furnace H	1H	4682B
USC Furnace J	1J	4682B
USC Furnace K	1K	4682B
USC Furnace L	1L	4682B

USC Furnace M	1M	4682B
USC Furnace N	1N	4682B
VMR Furnace A	3A	4682B
VMR Furnace B	3B	4682B
HP Steam Boiler A	4A	4682B
HP Steam Boiler B	4B	4682B
HP Steam Boiler C	4C	4682B
HP Steam Boiler D	4D	4682B
Steam S. Heater A	5A	4682B
Steam S. Heater B	5B	4682B
HDA Feed Heater	6	4682B
HDA Recycle Heater	7	4682B
Dryer Regeneration Heater	8	4682B
Cat. Reactivation Furnace	8A	4682B
Second Stage Feed Heater	31	4682B
Cogen Turbine	44	18358
Cogen Turbine w/ Duct Burner	44A	18358

Flares

<u>Description</u>	<u>EPN</u>	<u>Permit</u>
Hot Flare	10	4682B
Cold Flare	11	4682B
BDU Flare	BX001FL	6745B

Cooling Towers

<u>Description</u>	<u>EPN</u>	<u>Permit</u>
Olefin Cooling Tower	12	4682B
BDU Cooling Tower	BX003FE	6745B

Tanks

<u>Description</u>	<u>FIN</u>	<u>Permit</u>
Naphtha Feedstock Day Tank	16	4682B
Herosene Feedstock Day Tank	17	4682B
Light Fuel Oil Tank	18	4682B
Raw Pyrolysis Gasoline Tank	19	4682B
Heavy Oil Fuel Tank	20A	4682B
Heavy Oil Fuel Tank	20B	4682B
Benzene Tank	23A	4682B
HDA Tank	24	4682B

Feedstock Tank	30A	4682B
Feedstock Tank	30B	4682B
Feedstock Tank	30C	4682B
Lube Oil Tank	32	4682B
Wash Oil Tank	33	4682B
Spent Caustic Gasoline Wash Tank	39A	4682B
Spent Caustic Gasoline Wash Tank	39B	4682B
Recoverd Oil Tank	40	4682B
Methanol Tank	42	4682B
Fuel Oil Truck Loading	43	4682B
Spent Caustic Wasterwater	50	4682B
Spent Caustic Wasterwater	51	4682B
Wastewater Tank	52	4682B
Slop Oil Tank	53	4682B
Hot Water Belt Tank	55	4682B
Wastewater Collection	WWC-1	4682B
Toluene Mix Tank	D5.0001	6745B
Chemical A Tank	D5.0003	6745B
Slop Oil Tank	D5.0009	6745B
BD Wasterwater Tank	D5.0501	6745B
Dimethyl Formamide Tank	D.90006	6745B

Misc.

<u>Description</u>	<u>FIN</u>	<u>Permit</u>
Decoking Cyclone	9A	4682B
Decoking Cyclone	9B	4682B
Air Compressor Engine No. 1	AC-1	4682B
Air Compressor Engine No. 2	AC-2	4682B
BD Air Compressor	BDAC	6745B
Truck Loading Rack	L-43	4682B
Painting	Paint	4682B
BD Analyzer Vents	BDALV	6745B

Dated: November 2, 2012

Emission Sources - Maximum Allowable Emission Rates

Permit Number 83864 and PSDTX1120

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
BX001FL, 10 & 11	Maintenance, Startup, and Shutdown (MSS) Process Equipment and Vessel Flaring Activities	CO	721.67	54.97
		H ₂ S	0.27	0.02
		NO _x	138.78	10.57
		SO ₂	92.79	6.14
		VOC	1132.54	67.86
MSS-ATM	MSS Excluding Flaring Activities	CO	2.63	0.13
		H ₂ S	0.15	0.03
		NO _x	1.39	0.08
		PM/PM ₁₀	0.04	0.01
		SO ₂	0.15	0.03
		VOC	68.88	18.20

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3)
 - CO - carbon monoxide
 - H₂S - hydrogen sulfide
 - NO_x - total oxides of nitrogen
 - PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
 - PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
 - PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 - SO₂ - sulfur dioxide
 - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: November 2, 2012



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT



A Permit Is Hereby Issued To
Equistar Chemicals, LP
Authorizing the Construction and Operation of
Petrochemical Manufacturing Facility
Located at **Corpus Christi, Nueces County, Texas**
Latitude 27° 48' 45" *Longitude* -97° 35' 30"

Permit: 4682B and PSDTX761M3

Amendment Date : April 16, 2014

Renewal Date: February 10, 2022

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

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Emission Standards and Fuel Limits

1. Fuel oil used in the steam boiler designated as Emission Point Number (EPN) 4A shall contain no more than 0.90 percent sulfur by weight. When this steam boiler burns fuel oil then the holder of this permit shall demonstrate compliance with this special condition by performing a once a calendar quarter analysis of the fuel oil to determine its sulfur content. Hydrogen fuel is also authorized for fuel only in the steam boiler designated as EPN 4A.
2. The requirements of this permit condition shall be effective upon completion of the furnace modifications authorized by permit amendment PI-1 March 1 2013. Nitrogen oxides (NO_x) emissions from pyrolysis USC furnaces A through N and VMR furnaces A and B shall not exceed 0.06 pound per million Btu (lb/MMBtu) of heat input, averaged daily, except during decoking operations, hot standby periods and periods where there is no hydrocarbon feed. The CO emissions from these sources shall not exceed 0.036 lb/MMBtu of heat input, averaged daily except during decoking operations, hot standby periods and periods where there is no hydrocarbon feed. In all cases the maximum allowable emission rates as shown on the MAERT shall not be exceeded. **(PSD) (04/14)**
3. Fuels allowed for use in the USC and VMR furnaces are natural gas, in-plant produced fuel or other gaseous fuels with characteristics similar to natural or plant fuel gas. **(04/14)**
4. Records of decoking operations shall be maintained at the plant site and made available to Texas Commission on Environmental Quality (TCEQ) personnel upon request to demonstrate compliance with MAERT limits applicable to the decoke cyclones (EPN 9A and 9B) **(04/14)**

Visible Emission Limits

5. The opacity of emissions from the boiler stack designated as EPN 4A shall be continuously monitored and recorded whenever this steam boiler burns fuel oil. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that this steam boiler operated using fuel other than plant fuel gas or natural gas over the previous rolling 12-month period. Records of the amount of downtime and cause for the missed measurements shall be kept on site for a minimum of two years.
6. Opacity of emissions from pyrolysis USC furnaces A through N and VMR furnaces A and B shall not exceed 15 percent averaged over a six-minute period as determined by the U.S. Environmental Protection Agency (EPA) Reference Method

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9. Stack testing may be required if this opacity limit is exceeded from any subject furnace. **(04/14)**
7. Opacity of emissions from each decoking cyclone designated as EPN 9A and 9B shall not exceed 15 percent averaged over a six-minute period as determined by EPA Reference Method 9 once a week. Once a week opacity measurements shall be completed from one or both EPNs when an ethylene furnace is undergoing decoking. Each opacity measurement result shall be recorded at the plant site. These opacity results shall be reported to the nearest appropriate TCEQ regional office and EPA Region VI office on an annual basis. If this opacity limit from each EPN is exceeded, the TCEQ and/or EPA may require stack sampling from the decoking cyclone(s) EPN(s) per Special Condition No. 12 within 60 days, but not later than 120 days of this opacity exceedance. The possible use of established sampling procedures shall be discussed and approved at a pretest meeting as specified by Special Condition No. 12. **(PSD)**

Federal Compliance

8. These facilities shall comply with all applicable requirements of EPA regulations for New Source Performance Standards (NSPS) promulgated for Fossil Fuel-Fired Steam Generators, Volatile Organic Liquid Storage Vessels, and Equipment Leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemicals Manufacturing Industry in Title 40 Code of Federal Regulations (40 CFR) Part 60, Subparts A, D, K, Kb and VV.
9. These facilities shall comply with all applicable requirements of EPA regulations for National Emission Standards for Hazardous Air Pollutants (NESHAP) promulgated for Equipment Leaks of Benzene, Equipment Leaks, and Benzene Waste Operations in 40 CFR Part 61, Subparts A, J, V and FF.
10. These facilities shall comply with all applicable requirements of EPA regulations for National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry promulgated for 40 CFR Part 63, Subparts A, F, G, H, SS, UU, WW, XX, YY, ZZZZ, and DDDDD.

Sampling and Monitoring Requirements

11. If the normal production rate of the facilities listed below exceeds the operating rate maintained during sampling by more than 10 percent, the permit holder must notify, in writing, the appropriate TCEQ Regional Office and the source may be

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subject to additional sampling to demonstrate continued compliance with all applicable state and federal regulations. **(04/14)**

Maximum Operating Conditions

<u>Source</u>	<u>MMBtu/hr each</u>
HP Boilers A-D	302
USC Furnaces A, B, K, L	188
USC Furnaces C, D, E, F, G, H, J, M, N	290
VMR Furnaces A, B	126.7
Steam Superheaters A, B	146

12. Sampling ports and platform(s) shall be available for each type of ethylene furnace EPN and each ethylene furnace decoking cyclone EPN according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from each EPN designated in this special condition upon request by the TCEQ Executive Director. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the U.S. EPA Reference Methods. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

- A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

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The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Air Permits Division. Test waivers and alternate/equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the nearest TCEQ Regional Director.

- B. Air contaminants emitted from the ethylene furnace(s) to be tested for include (but are not limited to) oxides of nitrogen (NO_x) and carbon monoxide (CO). **(04/14)**
- C. Decoking opacity measurements shall occur not later than 180 days after April 16, 2014. Opacity measurement from one of the two ethylene furnace decoking cyclones designated as EPN 9A or 9B shall be tested according to EPA Reference Method 9. At the pretest meeting, additional parameters will be identified and selected for monitoring during the opacity measurement. The decoking cyclone to be measured for opacity shall be determined at the pretest meeting. **(04/14)**

Opacity measurements shall be done when the decoking cyclone is operating under maximum operating conditions. If the opacity measurements results demonstrate compliance with the percent opacity shown in special condition number seven then compliance is shown for the two decoking cyclones designated as EPNs 9A and 9B.

If the opacity measurements results do not demonstrate compliance with the percent opacity in special condition number seven then the decoking cyclones identified as EPN 9A and 9B are not in compliance; therefore, each decoking cyclone EPN will be subject to opacity measurements following the requirements in this special condition and Reference Method 9 to demonstrate

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compliance with the percent opacity requirements in special condition number seven. This follow up opacity measurements shall occur within 60 days, but not later than 120 days after the date the opacity measurements showed non compliance with the percent opacity in special condition number seven.

The opacity measurement(s) and cyclone stack test operating parameter(s) obtained from each decoking cyclone will be correlated with the most recent opacity measurements to develop a method of determining continuous compliance for opacity from decoking cyclone EPNs 9A and 9B. The continuous compliance method will be a calculation performed, updated and recorded by the permit holder once a day to clearly demonstrate ongoing compliance with percent opacity in special condition number seven from EPNs 9A and 9B. The calculation will be clearly documented by the permit holder and these records shall be clearly made readily available at the request of TCEQ or EPA personnel. **(PSD)**

- D. Sampling shall occur at such times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires EPA approval, and requests shall be submitted to the nearest TCEQ Regional Office.
- E. The plant shall operate at maximum production rates during stack emission testing. Primary conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph a and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if each ethylene furnace and/or each decoking cyclone operating values are greater than those same values recorded during the most recent stack test period, stack sampling shall be performed at the new operating conditions within 120 days.

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- F. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. One copy of the final sampling report shall be forwarded to the following within 60 days after sampling is completed:

One copy to the TCEQ Corpus Christi Regional Office.

One copy to the EPA, Air Enforcement Branch, Dallas Office.

Requirements for Continuous Emissions Monitoring Systems (CEMS)

13. The permit holder shall install, calibrate, and maintain a continuous emission monitoring System (CEMS) to measure and record the in-stack concentration of NO_x and CO from pyrolysis USC furnaces A through N and VMR furnaces A and B.

Each CEMS required for pyrolysis USC furnaces A through N and VMR furnaces A and B shall be operational not later than 60 days after the emission source achieves maximum operation, not to exceed 180 days after completion of modifications authorized by amendment application under PI-1 dated March 1, 2013. **(04/14)**

- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
- B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
- (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, ' 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

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- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days. Daily zero and span can be accomplished with either zero and span gas or appropriate optical filters to test analyzers.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rates in pounds per hour at least once every week. To determine the hourly emission rate, the measured hourly average concentration from the CEMS shall be multiplied by the allowable emission rate calculation basis flow rate identified in the permit application (PI-1 March 1, 2013).
- D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when the (facility generating emissions) is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control

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operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the (facility generating emissions) operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

Operation Limits

14. Records of production of all products and by-products shall be maintained and kept at the plant site for at least two years and made readily available to TCEQ personnel upon request.
15. Eight pilot-operated safety relief valve systems in gaseous service on the prefractionation tower, rectifier tower, demethanizer tower, deethanizer tower, ethylene tower, methane recycle system and two on the fuel gas system are not required to be equipped with rupture discs and disc monitoring systems. These valves in gaseous service are subject to instrument leak monitoring after any gaseous release to verify proper reseating of the valve in gaseous service under the requirements of Special Condition No. 21. **(04/14)**
16. Vacuum vent gases from Process Towers E1802 and E1803 shall be routed to HDA Feed Heater (B-1851) or to the Hot Flare designated as EPN 10. The heater shall operate at no less than 99.5 percent destruction removal efficiency (DRE) in disposing of the vent gas streams. The heater DRE shall be demonstrated by either vendor data or stack testing. Stack testing results shall be forwarded to the TCEQ Corpus Christi Regional Office within 60 days after testing has been completed.
17. Exported biphenyls shall be loaded via a pressurized loading system to pressurized trucks rated at 25 psig or higher.
18. Storage and Loading of VOC
 - A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.5 psia at the maximum expected operating temperature or (2) to storage tanks smaller than 25,000 gallons.
 - B. An internal floating roof or equivalent control shall be installed on all tanks.

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- C. An open top tank containing a floating roof which uses double seal or secondary seal technology shall be an approved control alternative to an internal floating roof tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal and the secondary seal is rim-mounted. A weathershield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.
 - D. For any tank equipped with a floating roof, the integrity of the floating roof seals shall be verified annually and records maintained to describe dates, seal integrity, and corrective actions taken.
 - E. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650, Appendix C or an equivalent degree of flotation, except that an internal floating cover need not be designed to meet rainfall support requirements.
 - F. Uninsulated tank exterior surfaces exposed to the sun shall be white.
 - G. For purposes of assuring compliance with VOC emission limitations, the holder of this permit shall maintain an annual emissions record which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method used, tank or vessel capacity in gallons, name of the material stored or loaded, VOC molecular weight, VOC average temperature in degrees Fahrenheit (°F), VOC vapor pressure at the average material temperature in psia, VOC throughput and total tons of emissions. This record shall be maintained at the plant site for at least two years and be made available to representatives of the TCEQ upon request.
 - H. Emissions for tanks and loading operations shall be calculated using the edition of AP-42, "Compilation of Air Pollutant Emission Factors," in effect on the date this permit was issued (or the edition in effect on the last date the permit was amended if the permit has been amended).
19. The cooling tower water shall be monitored monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director. Appendix P equipment shall be installed and operating 180 days from the month year of permit amendment approval.

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Cooling water VOC concentrations above 0.08 ppmw indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.

Emissions from the cooling tower are not authorized if the VOC concentration of the water returning to the cooling tower exceeds 0.80 ppmw. The VOC concentrations above 0.80 ppmw are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded.

Cooling water shall be sampled once a week for total dissolved solids (TDS). Dissolved solids in the cooling water drift are considered to be emitted as PM₁₀. The data shall result from collection of water samples from the cooling tower feed water and represent the water being cooled in the tower. Water samples should be capped upon collection, and transferred to a laboratory area for analysis. The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, and SM 2540 C [SM - 19th edition of Standard Methods for Examination of Water]. Use of an alternative method shall be approved by the TCEQ Regional Director prior to its implementation. **(04/14)**

Process Fugitive Monitoring

20. Piping, Valves, Flanges, Pumps, and Compressors in VOC Service - Applies to Components for EPN FU-4 NESHAP FF - 28M

- A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.5 pounds per square inch, absolute (psia) at 100°F or at maximum process operating temperature if less than 100°F or (2)) where the operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

- (1) piping and instrumentation diagram (PID);

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- (2) a written or electronic database or electronic file;
 - (3) color coding;
 - (4) a form of weatherproof identification; or
 - (5) designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves-such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe-to-monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe-to-monitor times. A difficult-to-monitor component for which quarterly monitoring is specified may instead be monitored annually.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from

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the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period:

- (1) a cap, blind flange, plug, or second valve must be installed on the line valve; or
 - (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once at the end of the 72-hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings 500 ppmv above background and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs are being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated

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average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

- G. Except as may be provided for in the special conditions of this permit, all pump, compressor and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. Seal systems that prevent emissions may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure or seals degassing to vent control systems kept in good working order.

Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

- H. Damaged or leaking valves, connectors, compressor seals, agitator seals, and pump seals found to be emitting VOC in excess of 10,000 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.
- I. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the

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time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

- J. Fugitive emission monitoring required by an applicable NSPS, 40 CFR Part 60, or an applicable NESHAP, 40 CFR Part 61, may be used in lieu of Items F through I of this condition.
- K. Compliance with the requirements of this condition does not assure compliance with requirements of NSPS or NESHAP and does not constitute approval of alternate standards for these regulations.

21. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - 28VHP - Applies to components for EPNs FU-1 EMACT, FU-2 HON, FU-3 VOC and EPN FUG

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:

- A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68° F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

- (1) piping and instrumentation diagram (PID);
 - (2) a written or electronic database or electronic file;
 - (3) color coding;
 - (4) a form of weatherproof identification; or
 - (5) designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable ANSI, API, ASME, or equivalent codes.

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- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe-to-monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe-to-monitor times. A difficult-to-monitor component for which quarterly monitoring is specified may instead be monitored annually.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or

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- (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once at the end of the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings 500 ppmv above background and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR Part 60, Appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs are being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

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- G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained.
- I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC § 115.782(c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC § 115.782(c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate

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action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

- J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.
 - K. Alternative monitoring frequency schedules of 30 TAC §§115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F through G of this condition.
 - L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable NSPS, or an applicable NESHAP and does not constitute approval of alternative standards for these regulations.
22. In addition to the weekly physical inspection required by Item E of Special Condition No. 21, all connectors in gas or vapor and light liquid service shall be monitored annually with an approved gas analyzer in accordance with Items F through J of Special Condition No. 21. Alternative monitoring frequency schedules of 40 CFR Part 63, Subpart H, National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, may be used in lieu of the monitoring frequency required by this permit condition. Compliance with this condition does not assure compliance with requirements of applicable state or federal regulation and does not constitute approval of alternative standards for these regulations. This special condition only applies to process fugitive components under the designation of EPN FU-2.

Two inch nominal size diameter and smaller process fugitive components under EPN FU-3 must comply with all applicable requirements of special condition number twenty-one within six months from the date of this permit renewal.

Flares

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23. Each flare designated as EPN 10 and EPN 11 shall be designed and operated in accordance with the following requirements:
- A. The combined assist natural gas and waste stream to each flare shall meet the 40 CFR 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset and maintenance flow conditions. Compliance with this condition shall be demonstrated by monitoring required in section D below. Flare testing per 40 CFR 60.18(f) may be requested by the TCEQ Corpus Christi Regional Office to demonstrate compliance with this condition.
 - B. The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications
 - C. Each flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of steam-assist to each flare.
 - D. The permit holder shall install, maintain and operate a continuous flow monitor and composition analyzer that provide a record of the vent stream flow and composition as total Btu content sent to each flare. Each flow monitor sensor and analyzer sample point(s) shall be installed in the vent stream as near as possible to each flare inlet such that the total vent stream directed to each flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow and composition shall be recorded each hour for each flare.

Each monitor shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor shall be $\pm 5.0\%$, temperature monitor shall be $\pm 2.0\%$ at absolute temperature, and pressure monitor shall be ± 5.0 mm Hg;

The holder of this permit will maintain a flare monitoring plan that will be subject to the following:

- (1) Flare gas Btu content shall be monitored using an on-line gas chromatograph. Data from the chromatograph shall be accessible and shall be monitored at the unit control room.

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- (2) Flare gas exit velocity shall be monitored using an on-line flow meter. The exit velocity shall be accessible and shall be monitored at the unit control room.
- (3) Single point calibration of the chromatograph shall be performed at least once per calendar month. In addition, single point calibration of the chromatograph shall be performed after significant maintenance, before returning the chromatograph to duty.
- (4) A physical check and inspection of the chromatograph system and of the on-line flow meter system shall be performed at least once per calendar month.

The monitors and analyzers shall operate as required by this section at least ninety-five percent of the time when the flare is operational, averaged over a rolling 12 month period. Flared gas net heating value and actual exit velocity determined in accordance with 40 CFR §60.18(f)(4) shall be recorded at least once every 15 minutes. Hourly mass emission rates shall be determined and recorded using the above readings and the emission factors used in the permit amendment application, Form PI-1 dated April 2010.

Painting Operations

24. Painting operations shall meet the following limits:

- A. No more than six pounds per hour of VOC emissions, averaged over any five-hour period, and 500 pounds per week shall be emitted at any time for all operations authorized by this paragraph.
- B. If coatings applied with spray equipment contain more than 0.1 percent by weight of chromates, lead, cadmium, selenium, strontium, or cobalt, then total VOC emissions shall be further limited to 240 pounds per week and 2,000 pounds per year. If coatings are applied with non-spray equipment (such as brushes, rollers, dipping, or flow coating), the additional restrictions in this paragraph do not apply.

Coating operations shall be conducted at least 50 feet from the property line and at least 250 feet from any recreational area, residence, or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located.

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Compliance Assurance Monitoring

25. The following requirements apply to capture systems for the hot flare designated as EPN 11 and the cold flare designated as EPN 10.

A. If used to control pollutants designated as VOC, either:

- (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
- (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

B. The control device shall not have a bypass.

or

If there is a bypass for the control device, comply with either of the following requirements:

- (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
- (2) Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals prevent flow out the bypass.

A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.

C. Records of the inspections required shall be maintained and if the results of any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.

Carbon Beds

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26. The covered oil water separator shall vent through a non regenerative carbon adsorption system (CAS) designated as EPN 13C consisting of at least two activated carbon canisters connected in series.
 - A. The CAS shall be sampled once a month to determine breakthrough of VOC. The sampling point shall be at the outlet of the initial canister but before the inlet to the second or final polishing canister. Sampling shall be done during normal operation of the covered oil water separator.
 - B. The VOC sampling and analysis shall be performed using an instrument with a photo ionization detector (PID), or a TCEQ-approved alternative detector. The instrument/PID must meet all requirements specified in Section 8.1 of EPA Method 21 (40 CFR 60, Appendix A). Sampling and analysis for VOC breakthrough shall be performed as follows:
 - (1) Immediately prior to performing sampling, the instrument/PID shall be calibrated with zero and span calibration gas mixtures. Zero gas shall be certified to contain less than 0.1 ppmv total hydrocarbons. Span calibration gas shall be a calibration gas such that the response factor (RF) of the VOC (or mixture of VOC's) being monitored is less than 2.0 at a concentration within ± 10 percent of 100 ppmv, and certified by the manufacturer to be ± 2 percent accurate. Calibration error for the zero and span calibration gas checks must be less than ± 5 percent of the span calibration gas value before sampling may be conducted.
 - (2) The sampling point shall be at the outlet of the initial canister but before the inlet to the second or final polishing canister. Sample ports or connections must be designed such that air leakage into the sample port does not occur during sampling.
 - (3) During sampling, data recording shall not begin until after two times the instrument response time. The VOC concentration shall be monitored for at least 5 minutes, recording 1-minute averages, during normal operation of the covered oil water separator.
 - C. Breakthrough shall be defined as the highest one minute average measured VOC concentration at or exceeding 100 ppmv. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within twenty-four hours. Sufficient new activated carbon canisters shall be maintained at the site to replace spent

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carbon canisters such that replacements can be done in the above specified time frame.

- D. Records of the CAS monitoring maintained at the plant site, shall include (but are not limited to) the following:
- (1) Sample time and date.
 - (2) Monitoring results (ppmv).
 - (3) Corrective action taken including the time and date of that action.
 - (4) Process operations occurring at the time of sampling.
- E. Alternate monitoring or sampling requirements that are equivalent or better may be approved by the TCEQ Regional Manager. Alternate requirements must be approved in writing before they can be used for compliance purposes.

Prevention of Significant Deterioration Netting and Contingencies

27. This Prevention of Significant Deterioration (PSD) permit (PSD-TX761M3) authorizing project increases of VOC (119.89 tpy), CO (805.74 tpy), PM (20.67 tpy), PM10 (18.81 tpy), PM2.5 (15.62 tpy) and NOx (315.87 tpy) is conditioned on permit application representations (i.e., PI-1 dated March 1, 2013):

Tables 1-3 F: (e.g., contemporaneous period changes: reductions by 4Q 2014)

Cooling tower cells (Q, P, N, M, L & K of EPN 12) shall be fitted with drift eliminators allowing no more than 0.001% drift. The drift eliminators shall be installed prior to startup of the new cooling tower cells (EPN 12B). Prior to and until the installation of the drift eliminators on EPN 12 is complete, the cumulative firing rate for the existing fired sources identified in Special Condition No. 11 of this permit shall be limited to the sum allowed by the firing rates [i.e., Maximum Operating Conditions (MMBtu/hr each)] listed in that condition, as approved by the June 26, 2012 amendment of this permit.

The permit holder shall maintain records of the resulting emission reductions. Construction of the authorized facilities must commence as defined in 40 CFR § 52.21(b)(9) not later than five years after all the emission reductions identified in the netting analysis are actually accomplished; otherwise, the identified reductions are no longer creditable and the amendment is void. **(04/14)**

Referenced Permits-by-Rule

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28. The following sources and/or activities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code Chapter 106 (30 TAC Chapter 106). These lists are not intended to be all inclusive and can be altered without modifications to this permit. **(04/14)**

Authorization	Source or Activity
PBR No. 95855	Change of service for Tank F-2009A
PBR No. 101862	Construction of tank truck unloading racks for condensate

Dated April 16, 2014

EMISSION SOURCES – MAXIMUM ALLOWABLE EMISSION RATES

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This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
1A	USC Furnace A	CO (9)	6.74	29.52
		NO _x	11.28	49.41
		PM	0.94	4.12
		PM _{2.5}	0.94	4.12
		PM ₁₀	0.94	4.12
		SO ₂	0.11	0.48
		VOC	1.01	4.44
1A (13)	USC Furnace A	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1B	USC Furnace B	CO (9)	6.74	29.52
		NO _x	11.28	49.41
		PM	0.94	4.12
		PM _{2.5}	0.94	4.12
		PM ₁₀	0.94	4.12
		SO ₂	0.11	0.48
		VOC	1.01	4.44
1B (13)	USC Furnace B	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1C	USC Furnace C	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
1C (13)	USC Furnace C	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1D	USC Furnace D	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85
1D (13)	USC Furnace D	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1E	USC Furnace E	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85
1E (13)	USC Furnace E	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1F	USC Furnace F	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
1F (13)	USC Furnace F	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1G	USC Furnace G	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85
1G (13)	USC Furnace G	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1H	USC Furnace H	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85
1H (13)	USC Furnace H	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1J	USC Furnace J	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
1J (13)	USC Furnace J	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1K	USC Furnace K	CO (9)	6.74	29.52
		NO _x	11.28	49.41
		PM	0.94	4.12
		PM _{2.5}	0.94	4.12
		PM ₁₀	0.94	4.12
		SO ₂	0.11	0.48
		VOC	1.01	4.44
1K (13)	USC Furnace K	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1L	USC Furnace L	CO (9)	6.74	29.52
		NO _x	11.28	49.41
		PM	0.94	4.12
		PM _{2.5}	0.94	4.12
		PM ₁₀	0.94	4.12
		SO ₂	0.11	0.48
		VOC	1.01	4.44
1L (13)	USC Furnace L	CO (9)	11.98	52.48
		NO _x	27.10	118.71
		PM ₁₀	1.08	4.75
		SO ₂	0.09	0.39
		VOC	0.78	3.44
1M	USC Furnace M	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
1M (13)	USC Furnace M	CO	20.36	89.19
		NO _x	27.30	119.58
		PM ₁₀	1.84	8.07
		SO ₂	0.15	0.67
		VOC	1.33	5.84
1N	USC Furnace N	CO (9)	10.40	45.54
		NO _x	17.40	76.21
		PM	1.45	6.35
		PM _{2.5}	1.45	6.35
		PM ₁₀	1.45	6.35
		SO ₂	0.17	0.75
		VOC	1.56	6.85
1N (13)	USC Furnace N	CO	20.36	89.19
		NO _x	27.30	119.58
		PM ₁₀	1.84	8.07
		SO ₂	0.15	0.67
		VOC	1.33	5.84
3A	VMR Furnace A	CO (9)	4.54	19.89
		NO _x	7.60	33.30
		PM	0.63	2.77
		PM _{2.5}	0.63	2.77
		PM ₁₀	0.63	2.77
		SO ₂	0.07	0.33
		VOC	0.68	2.99
3A (13)	VMR Furnace A	CO (9)	7.28	31.90
		NO _x	8.67	37.98
		PM ₁₀	0.66	2.89
		SO ₂	0.05	0.24
		VOC	0.48	2.09
3B	VMR Furnace B	CO (9)	4.54	19.89
		NO _x	7.60	33.30
		PM	0.63	2.77
		PM _{2.5}	0.63	2.77
		PM ₁₀	0.63	2.77
		SO ₂	0.07	0.33
		VOC	0.68	2.99

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
3B (13)	VMR Furnace B	CO (9)	7.28	31.90
		NO _x	8.67	37.98
		PM ₁₀	0.66	2.89
		SO ₂	0.05	0.24
		VOC	0.48	2.09
4A	HP Steam Boiler A	CO	23.65	103.59
		NO _x	94.63	414.46
		PM ₁₀	23.14	101.33
		SO ₂	284.48	1246.04
		SO ₃	10.33	25.24
4B	HP Steam Boiler B	VOC	1.56	6.78
		CO	23.65	103.59
		NO _x	53.50	234.32
		PM ₁₀	2.14	9.37
		SO ₂	0.18	0.78
4C	HP Steam Boiler C	VOC	1.56	6.78
		CO	23.65	103.59
		NO _x	53.50	234.32
		PM ₁₀	2.14	9.37
		SO ₂	0.18	0.78
4D	HP Steam Boiler D	VOC	1.56	6.78
		CO	23.65	103.59
		NO _x	53.50	234.32
		PM ₁₀	2.14	9.37
		SO ₂	0.18	0.78
5A	Steam Superheater A	VOC	0.79	3.44
		SO ₂	0.09	0.38
		PM ₁₀	0.73	3.19
		PM _{2.5}	0.73	3.19
		PM	0.73	3.19
		NO _x	8.74	38.26
		CO (9)	5.22	22.86

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
5A (13)	Steam Superheater A	CO	5.25	22.98
		NO _x	6.25	27.36
		PM ₁₀	0.47	2.08
		SO ₂	0.04	0.17
		VOC	0.34	1.50
5B	Steam Superheater B	CO (9)	5.22	22.86
		NO _x	8.74	38.26
		PM	0.73	3.19
		PM _{2.5}	0.73	3.19
		PM ₁₀	0.73	3.19
		SO ₂	0.09	0.38
		VOC	0.79	3.44
5B (13)	Steam Superheater B	CO	5.25	22.98
		NO _x	6.25	27.36
		PM ₁₀	0.47	2.08
		SO ₂	0.04	0.17
		VOC	0.34	1.50
6	HDA Feed Heater	CO	7.08	31.00
		NO _x	8.42	36.90
		PM ₁₀	0.64	2.80
		SO ₂	0.05	0.23
		VOC	0.46	2.03
7	HDA Recycle Heater	CO	0.49	2.15
		NO _x	0.59	2.56
		PM ₁₀	0.04	0.19
		SO ₂	0.01	0.02
		VOC	0.03	0.14
8	Dryer Regeneration Heater	CO	1.61	7.05
		NO _x	1.92	8.39
		PM ₁₀	0.15	0.64
		SO ₂	0.01	0.05
		VOC	0.11	0.46
8A	Cat. Reactivation Furnace	CO	2.12	9.30
		NO _x	2.53	11.07
		PM ₁₀	0.19	0.84
		SO ₂	0.02	0.07
		VOC	0.14	0.61

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
9A	South Decoking Cyclone	CO (10) PM PM _{2.5} PM ₁₀ VOC	1932.94 11.63 3.58 3.58 0.05	135.80 1.37 0.43 0.43 0.02
9A (13)	Decoking Cyclone	CO (10) PM PM ₁₀ VOC	1674.80 9.91 3.05 0.03	80.06 0.80 0.25 0.02
9B	North Decoking Cyclone	CO (10) PM PM _{2.5} PM ₁₀ VOC	1999.16 12.47 3.84 3.84 0.04	133.80 1.35 0.42 0.42 0.02
9B (13)	Decoking Cyclone	CO (10) PM PM ₁₀ VOC	906.86 6.82 2.01 0.03	66.37 0.66 0.21 0.02
10	Hot Flare	CO NO _x SO ₂ VOC	1092.65 209.76 64.68 369.22	37.00 8.21 2.51 6.94
11	Cold Flare	CO NO _x SO ₂ VOC	100.84 19.39 0.08 76.88	13.84 2.92 0.13 2.61
12	Cooling Tower (5)	VOC PM PM ₁₀ PM _{2.5}	2.92 4.05 4.05 1.20	12.79 15.33 15.33 4.55
12 (13)	Cooling Tower (5)	VOC PM PM ₁₀ PM _{2.5}	2.92 34.86 33.37 5.63	12.79 105.75 103.54 20.78

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
12B	Cooling Tower (5)	VOC	2.02	3.72
		PM	1.20	4.54
		PM ₁₀	1.20	4.54
		PM _{2.5}	0.36	1.35
13C	Carbon Canisters in Series	VOC	0.06	0.01
13C (13)	Carbon Canisters in Series	VOC	0.04	0.01
16	Naphtha Feedstock Day Tank	VOC	1.52	2.52
17	Kerosene Feedstock Day Tank	VOC	1.52	2.47
18	Light Fuel Oil Tank	VOC	3.07	4.30
19	Raw Pyrolysis Gasoline Tank	VOC	1.74	4.90
20A	Heavy Oil Fuel Tank	VOC	4.30	5.10
20B	Heavy Oil Fuel Tank	VOC	4.30	5.10
23A	Benzene Tank	VOC	0.17	0.31
24	HDA Tank	VOC	1.45	3.94
30A	Feedstock Tank	VOC	3.37	10.01
30B	Feedstock Tank	VOC	3.37	10.04
30C	Feedstock Tank	VOC	3.39	10.13
31	Second Stage Feed Heater	CO	1.27	5.55
		NO _x	1.51	6.60
		PM ₁₀	0.11	0.50
		SO ₂	0.01	0.04
		VOC	0.08	0.36
32	Lube Oil Tank	VOC	16.27	0.15
33	Wash Oil Tank	VOC	0.23	0.43
39A	Spent Caustic Gasoline Wash Tank	VOC	0.64	1.07
39B	Spent Caustic Gasoline Wash Tank	VOC	0.41	0.85
40	Recovered Oil Tank	VOC	0.30	0.87
42	Methanol Tank	VOC	4.08	0.04
43	Fuel Oil Truck Loading	VOC	29.63	7.04

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
50	Spent Caustic Wastewater	VOC	0.03	0.06
51	Spent Caustic Wastewater	VOC	0.06	0.12
52	Wastewater Tank	VOC	0.75	1.15
53	Slop Oil Tank	VOC	0.26	0.77
55	Hot Water Belt Tank	VOC	1.01	3.19
AC-1	Air Compressor Engine No. 1 (8)	CO	2.74	2.05
		NO _x	3.03	2.27
		PM ₁₀	0.16	0.12
		SO ₂	0.97	0.73
		VOC	0.12	0.09
AC-2	Air Compressor Engine No. 2 (8)	CO	2.74	2.05
		NO _x	3.03	2.27
		PM ₁₀	0.16	0.12
		SO ₂	0.97	0.73
		VOC	0.12	0.09
F2602A	Vehicle Diesel Tank	VOC	0.70	0.01
F2603	Vehicle Gasoline Tank	VOC	51.22	1.26
FA1665	Diesel Tank	VOC	0.22	0.01
FU-1	EMACT Process Fugitive (5)	VOC	23.13	101.36
FU-2	HON Process Fugitive (5)	VOC	0.93	4.08
FU-3	Process Fugitive (5)	VOC (11)	17.90	78.41
		VOC (12)	13.73	60.13
FU-4	NESHAP FF Fugitive (5)	VOC	0.02	0.10
FUG	Fugitive Emissions	VOC	7.96	34.87
FWDIESELA	Firewater Diesel Tank	VOC	0.02	0.01
FWDIESELB	Firewater Diesel Tank	VOC	0.02	0.01
FWDIESELC	Firewater Diesel Tank	VOC	0.02	0.01
FWDIESELD	Firewater Diesel Tank	VOC	0.02	0.01

Emission Sources – Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
J-2019-A	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13
J-2019-B	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13
J-2019-C	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13
J-2019-D	Olefin Firewater Engine (7)	CO NO _x PM ₁₀ SO ₂ VOC	2.87 13.33 0.95 0.88 1.06	0.36 1.67 0.12 0.11 0.13
L-1697	Emergency Generator (6)	CO NO _x PM ₁₀ SO ₂ VOC	0.85 10.37 0.06 1.65 0.02	0.02 0.27 0.01 0.04 0.01
PAINT	Painting	VOC	7.39	4.81
WWC-1	Wastewater Collection	VOC	2.00	0.32
WWC-1 (13)	Wastewater Collection	VOC	1.37	0.22

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO - carbon monoxide
NO_x - total oxides of nitrogen
PM - particulate matter
PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented

Emission Sources – Maximum Allowable Emission Rates

- PM_{2.5} - total particulate matter equal to or less than 2.5 microns in diameter
SO₂ - sulfur dioxide
SO₃ - sulfur trioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
 - (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
 - (6) 52 hours per rolling twelve months of operation
 - (7) 250 hours per rolling twelve months of operation
 - (8) 1,500 hours per rolling twelve months of operation
 - (9) PSDTX761M1 pollutant
 - (10) PSDTX761M2 pollutant
 - (11) Pre-control emissions
 - (12) Post-control emissions
 - (13) The indicated emission rate limits apply to this EPN until the modifications represented in the amendment application received under PI-1, March 1, 2013, are completed consistent with the construction schedule required by General Condition No. 2 of this permit. The emission rate limits indicated for this EPN without this footnote reference apply upon completion of the described modifications.

Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Hrs/day 24 Days/week 7 Weeks/year 52

Date: April 16, 2014



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT



A Permit Is Hereby Issued To
Equistar Chemicals, LP
Authorizing the Continued Operation of
Gas Turbine Cogeneration Facility
Located at Corpus Christi, Nueces County, Texas
Latitude 27° 48' 24" Longitude 97° 35' 29"

Permits: 18358 and PSDTX732M1

Issuance Date : May 30, 2013

Renewal Date: May 30, 2023


For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

SPECIAL CONDITIONS

Permit Numbers 18358 and PSD-TX-732M1

EMISSION STANDARDS AND FUEL SPECIFICATIONS-SPECIAL CONDITION NOS. 1-6

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table.
2. This facility shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations Part 60, Subparts A, Db, and GG (40 CFR Part 60, Subparts A, Db, and GG on Standards of Performance for New Stationary Sources promulgated for Gas Turbines and Duct Burners. If any condition of this permit is more stringent than the regulation so incorporated, then for the purposes of complying with this permit, the permit condition shall govern and be the standard by which compliance shall be demonstrated.
3. The concentration of nitrogen oxides (NO_x) in the stack gases from the turbine shall not exceed 42 ppmv while firing natural gas and 65 ppmv while firing the maximum volume and hydrogen content plant fuel gas or fuel oil. The injection rates necessary to maintain compliance with a 42 ppmv NO_x limit while firing natural gas shall be the minimum injection rates regardless of fuel type. Measured stack concentrations shall be expressed on a dry basis at 15 percent oxygen (O₂).
4. The NO_x emissions generated in the duct burners shall not exceed 0.16 lbs/MMBtu heat input while firing fuel oil, 0.12 lbs/MMBtu heat input while firing plant fuel gas, and 0.10 lb/MMBtu heat input while firing natural gas.
5. Fuel fired in the gas turbine and duct burner is limited to:
 - A. Pipeline quality natural gas containing no more than 4 ppmv sulfur;
 - B. Plant produced fuel gas containing no more than 4 ppmv sulfur; and
 - C. Plant produced fuel oil containing no more than 0.15 percent by weight sulfur.Use of any other fuel will require a modification to this permit.
6. Emission from the gas turbine shall not exceed 5 percent opacity as determined by EPA Reference Method 9. The occurrence of visible emissions so determined shall also be considered a violation of the hourly particulate matter (PM) mass emission limit of Special Condition No. 1.

SPECIAL CONDITIONS

Permit Numbers 18358 and PSD-TX-732M1

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INITIAL DETERMINATION OF COMPLIANCE -- SPECIAL CONDITIONS NO. 7-9

7. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the turbine and associated duct burner. Sampling shall be conducted in accordance with appropriate procedures of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and in accordance with EPA Reference Method 5 for PM, Reference Method 8 for sulfuric acid (H_2SO_4) mist, Reference Method 9 for opacity, Reference Method 10 for the concentration of carbon monoxide (CO), Reference Method 20 for the concentrations of NO_x and O_2 , Reference Method 101 for mercury (Hg), Reference Method 104 for beryllium (Be), and Reference Method 108 for arsenic (As). For gaseous fuel, sampling by means of one of the appropriate test methods specified in 40 CFR § 60.335(b) shall be conducted to determine initial compliance with the sulfur dioxide (SO_2) emission and fuel sulfur limits of Special Condition Nos. 1 and 5. For fuel oil, Reference Method 8 shall be used to determine initial compliance with the SO_2 and H_2SO_4 emission limits of Special Condition No. 1. In addition, the fuel oil sulfur content shall be sampled using one of the methods specified in 40 CFR § 60.335(b) to determine initial compliance with the fuel sulfur limits of Special Condition No. 5.

The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operation at his expense.

- A. The TCEQ Corpus Christi Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

SPECIAL CONDITIONS

Permit Numbers 18358 and PSD-TX-732M1

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- A written proposed description of any deviation from sampling procedures specified in permit condition or the TCEQ or the EPA sampling procedures shall be made available to the TCEQ at or prior to the pretest meeting. The TCEQ Regional Director or the Manager of the Engineering Services Team may approve or disapprove of any deviation from specified sampling procedures (if necessary, after consultation with the Prevention of Significant Deterioration issuing agency). Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division. Test waivers and alternate or equivalent procedure proposals for New Source Performance Standards testing which must have the EPA approval shall be submitted to the TCEQ in Austin for further review and approval by the EPA.
- B. While firing natural gas, CO, O₂, and NO_x emissions shall be sampled concurrently at four turbine loads; including the minimum point in the normal operating range and the peak load for the atmospheric conditions occurring during the test. The NO_x concentrations shall be corrected according to Special Condition No. 3.
- C. While firing fuel oil, CO, O₂, and NO_x emissions shall be sampled concurrently at four turbine loads; including the minimum point in the normal operating range and the peak load for the atmospheric conditions occurring during the test. The NO_x concentrations shall be corrected according to Special Condition No. 3. Testing while firing fuel oil may be postponed as provided in Special Condition No. 9.
- D. For natural gas firing and independently for fuel oil firing, PM, opacity, and SO₂ emissions shall be sampled while the turbine and duct burner are firing at the maximum combined rate for the ambient conditions occurring during the test. The opacity test shall consist of at least 30 six-minute readings as provided in 40 CFR § 60.11(b). The H₂SO₄, As, Be, and Hg emissions shall be sampled while firing fuel oil at the maximum rate. The fuel shall be analyzed for fluoride (F) and lead (Pb) content using an appropriate SW 846 (EPA) or American Society for Testing and Materials (ASTM) sampling method. Testing while firing fuel oil may be postponed as provided in Special Condition No. 9.
- E. The NO_x, CO, and O₂ shall be determined simultaneously upstream and downstream of the duct burner while the turbine and duct burner are firing at the maximum combined rate for the ambient conditions occurring during the tests. The duct burner NO_x emission rate shall be determined by subtracting the upstream measurement from the downstream measurement. One test of three runs shall be performed while firing natural gas, one test of three runs shall be performed while firing the maximum volume of fuel gas containing the maximum hydrogen content, and an additional test of three runs shall be performed while firing fuel oil.
- Testing while firing plant fuel gas or fuel oil may be postponed as provided in Special

SPECIAL CONDITIONS

Permit Numbers 18358 and PSD-TX-732M1

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Condition No. 8.

F. Sampling shall occur within 60 days after achieving the maximum production rate at which the turbine will be operated, but no later than 180 days after initial start-up of the turbine. The TCEQ or the EPA may require additional sampling at other times as deemed appropriate.

G. Three copies of the sampling report shall be distributed as follows:

One copy to the TCEQ Corpus Christi Regional Office.

One copy to the TCEQ Office of Permitting, Remediation, and Registration, Air Permits Division, Austin.

One copy to the Air Enforcement Branch of the EPA in Dallas.

8. Sampling required in Special Condition No. 7E to establish the actual pattern and quantity of air contaminants emitted from the duct burner while firing fuel gas or fuel oil may be waived by the Executive Director of the TCEQ as a condition for applying for an operating permit, provided that the duct burner has not been fired on fuel gas for more than 360 hours. Within 15 days after the duct burner exceeds 360 total hours of fuel gas firing, the holder of this permit shall submit to the TCEQ Executive Director and the TCEQ Corpus Christi Regional Office a schedule for testing the duct burner for NO_x, CO, and O₂ while firing fuel gas. The proposed testing schedule shall be submitted not less than 45 days prior to the proposed testing date. Except for the test schedule provided in this condition and in Special Condition No. 9, testing shall be performed in accordance with Special Condition No. 7.
9. Sampling required in Special Condition No. 7C and D to establish the actual pattern and quantity of air contaminants emitted from the gas turbine while firing fuel oil may be waived by the Executive Director of the TCEQ as a condition for applying for an operating permit, provided that the gas turbine has not been fired on fuel oil for more than 360 hours. Within 15 days after the gas turbine exceeds 360 total hours of fuel oil firing, the holder of this permit shall submit to the Executive Director and the TCEQ Corpus Christi Regional Office a schedule for testing the gas turbine for the air contaminants listed in Special Condition No. 7C while firing fuel oil. The proposed testing schedule shall be submitted not less than 45 days prior to the proposed testing date. Except for the test schedule provided in this condition and in Special Condition No. 8, testing shall be performed in accordance with Special Condition No. 7.

CONTINUOUS DEMONSTRATION OF COMPLIANCE-SPECIAL CONDITION NOS. 10-12

SPECIAL CONDITIONS

Permit Numbers 18358 and PSD-TX-732M1

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10. The steam injection rates necessary to comply with the NO_x concentration limits of Special Condition No. 3 shall be determined by the custom ambient temperature and humidity correction algorithm supplied by the turbine manufacturer, which shall be calibrated by means of the initial stack sampling required in Special Condition No. 7B. The injection rates necessary to maintain compliance with a 42 ppmv NO_x limit while firing natural gas shall be maintained during all periods of gas-fired turbine operation except during start-up or shutdown (defined as turbine operation at less than 30 percent of base load, the initial turbine ramp-up, or turbine turndown periods during a steam outage, not to exceed four hours). The injection rates (may not be less than gas fuel case) necessary to maintain compliance with a 65 ppmv NO_x limit shall be maintained during all periods of fuel oil-fired turbine operation except during start-up or shutdown. The required steam injection rates shall be used to determine continuous compliance with Special Condition No. 3.
11. The holder of this permit shall install and operate a continuous monitoring system to monitor and record ambient temperature, ambient humidity, fuel flow, actual ratio of NO_x injection steam-to-fuel flow, and predicted ratio of NO_x injection steam-to-fuel flow required by the turbine NO_x controller. The flow measurement devices and NO_x steam controller shall be accurate to ± 5.0 percent and shall be approved by the Executive Director of the TCEQ prior to the initial compliance demonstration required under Special Condition No. 7.
12. The holder of this permit shall comply with the turbine fuel sulfur monitoring requirements of 40 CFR § 60.334(b), as modified by the custom monitoring schedule granted by the EPA on April 2, 1990 or any subsequent custom schedules granted by the EPA. Any custom schedule approved by EPA pursuant to 40 CFR § 60.334(b) will be recognized as enforceable conditions of this permit, provided that the holder of this permit demonstrates that the conditions of such custom schedule will be adequate to assure continuous compliance with Special Condition Nos. 1 and 5. Fuel oil fired in the facility shall be monitored for As, Be, F, Hg, and Pb content in accordance with the turbine fuel oil sulfur monitoring schedule, as modified by any custom monitoring schedule granted by the EPA. Test methods used to conduct the trace metal analyses shall be appropriate SW 846 (EPA) or ASTM sampling methods.

COMPLIANCE CONDITION

13. After initial demonstration of compliance, in the event different methods for measuring the stack or fuel concentration standards disagree as to the concentration for purposes of demonstrating compliance, the methods required for continuous demonstration of compliance under Special Condition Nos. 10, 11, and 12 shall be the best evidence of compliance.

RECORDKEEPING REQUIREMENTS

SPECIAL CONDITIONS

Permit Numbers 18358 and PSD-TX-732M1

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14. The following information shall be made and maintained by the source for a period of two years on a rolling retention basis and shall be made available on request to representatives of the TCEQ, the EPA, or any local air pollution control program having jurisdiction:
 - A. Records required by 40 CFR § 60.7.
 - B. Average hourly actual and required steam versus fuel input records. Hourly periods during which fuel other than natural gas is fired in the turbine shall be indicated on the steam versus fuel input records. Additional monitoring records shall be maintained according to 40 CFR § 60.7(d).
 - C. The results of all fuel sampling conducted pursuant to Special Condition No. 12.

REPORTING

15. In accordance with 40 CFR § 60.334(c)(1) and 40 CFR § 60.7(c), quarterly emission reports shall be sent to the TCEQ Compliance Division, the TCEQ Corpus Christi Regional Office, and the Air Enforcement Branch of EPA in Dallas. Such reports are required for the continuous steam-to-fuel ratio monitoring required pursuant to Special Condition No. 11 and the turbine fuel monitoring required pursuant to Special Condition No. 12. In addition to the information specified in 40 CFR § 60.7(c), each report shall contain the hours of operation of the facility and a report summary of the periods of noncomplying emissions and monitor down times by cause.
16. For the purposes of reporting pursuant to Special Condition No. 15, noncomplying emissions are defined as follows:
 - A. Noncomplying emissions of NO_x are each one-hour period of turbine operation, except during start-up or shutdown, during which the actual hourly steam mass injection rate falls below the steam mass injection rates determined in Special Condition No. 10. Such periods will be considered to be violations of the emission limitations of Special Condition Nos. 1 and 3.
 - B. Noncomplying emissions of SO₂ are defined as any sample of fuel which is found to contain sulfur in excess of the sulfur limitations of Special Condition No. 5 or which indicates an exceedance of the SO₂ emission limitation of Special Condition No. 1, based upon 100 percent conversion of the sulfur in the fuel to SO₂.
 - C. Noncomplying emissions of As, Be, F, Hg, H₂SO₄, and Pb are defined as:
 - (1) As, F, Hg, or Pb - any sample of fuel oil which is found to contain in excess of 1

SPECIAL CONDITIONS

Permit Numbers 18358 and PSD-TX-732M1

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ppmw of any of these elements.

- (2) Be - any sample of fuel oil which is found to contain Be in excess of 0.25 ppmw.
- (3) H₂SO₄ - any sample of fuel oil whose sulfur content indicates an exceedance of the H₂SO₄ emission limitation of Special Condition No. 1, based on the H₂SO₄ conversion rate determined by Special Condition No. 7D.

Samples in excess of 1, 2, or 3 above shall be considered violations of Special Condition No. 1.

Dated July 21, 2003

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 18358 and PSD-TX-732M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission	Source	Air Contaminant	Emission Rates *	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY**
Case I: Natural Gas or Plant Fuel Gas Firing; Duct Burner Fired				
44	37 MW Gas Turbine and 223 MMBtu/hr Fired Duct Burner	VOC	7.4	28
		NO _x	153.1	601
		SO ₂	0.54	2.2
		PM ₁₀	5.2	23
		CO	21.1	88
Case II: Natural Gas or Plant Furl Gas Firing; Duct Burner Unfired				
44	37 MW Gas Turbine	VOC	7	26
		NO _x	130	499
		SO ₂	0.4	1.5
		PM ₁₀	3.9	17
		CO	11	44
Case III: Fuel Oil Firing; Duct Burner Fired				
44	37 MW Gas Turbine and 223 MMBtu/hr Fired Duct Burner	VOC	7.4	28
		NO _x	167.7	675
		SO ₂	112.2	455
		PM ₁₀	20	88
		CO	18.4	77
		H ₂ SO ₄	5.6	20.3
		Be	0.0093	0.038
		As	0.037	0.15
		Cd	0.037	0.15
		Cr	0.037	0.15
		F	0.037	0.15
		Pb	0.037	0.15
		Hg	0.037	0.15

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
		Mn	0.037	0.15
		Ni	0.037	0.15
44	37 MW Gas Turbine and 223 MMBtu/hr Fired Duct Burner	Se	0.037	0.15
		V	0.037	0.15

Case IV: Fuel Oil Firing; Duct Burner Unfired

44	37 MW Gas Turbine	VOC	7	26
		NO _x	137.0	539
		SO ₂	80.7	315
		PM ₁₀	17.0	75
		CO	11.0	44
		H ₂ SO ₄	5.0	17.5
		Be	0.0067	0.026
		As	0.027	0.11
		Cd	0.027	0.11
		Cr	0.027	0.11
		F	0.027	0.11
		Hg	0.027	0.11
		Mn	0.027	0.11
		Ni	0.027	0.11
		Pb	0.027	0.11
		Se	0.027	0.11
		V	0.027	0.11

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
IOC-U - inorganic compounds (unspeciated)
NO_x - total oxides of nitrogen
SO₂ - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM₁₀.
PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
CO - carbon monoxide
Be - beryllium
As - arsenic
F - fluoride
Pb - lead
Cd - cadmium
Cr - chromium
Hg - mercury
Mn - manganese
Ni - nickel
Se - selenium
V - vanadium
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated July 21, 2003

**PREVENTION OF SIGNIFICANT DETERIORATION PERMIT
FOR GREENHOUSE GAS EMISSIONS
ISSUED PURSUANT TO THE REQUIREMENTS AT 40 CFR § 52.21**

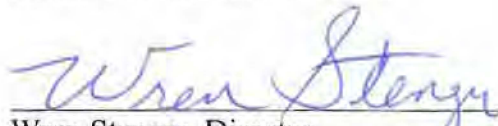
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 6

PSD PERMIT NUMBER:	PSD-TX-761-GHG
PERMITTEE:	Equistar Chemicals, L.P. 1501 McKinzie Road Corpus Christi, TX 78410
FACILITY NAME:	Equistar Chemicals, L.P. Corpus Christi Complex
FACILITY LOCATION:	1501 McKinzie Road Corpus Christi, TX 78410

Pursuant to the provisions of the Clean Air Act (CAA), Subchapter I, Part C (42 U.S.C. Section 7470, *et. Seq.*), and the Code of Federal Regulations (CFR) Title 40, Section 52.21, and the Federal Implementation Plan at 40 CFR § 52.2305 (effective May 1, 2011 and published at 76 FR 25178), the U.S. Environmental Protection Agency, Region 6 is issuing a *Prevention of Significant Deterioration* (PSD) permit to Equistar Chemicals, L.P. (Equistar) for Greenhouse Gas (GHG) emissions. The Permit authorizes the modification and construction of new equipment at the Corpus Christi Complex, located in Nueces County, Texas.

Equistar is authorized to modify and construct new equipment to expand their olefins production at the Corpus Christi Complex as described herein, in accordance with the permit application (and plans submitted with the permit application), the federal PSD regulations at 40 CFR § 52.21, and other terms and conditions set forth in this PSD permit in conjunction with the corresponding Texas Commission on Environmental Quality (TCEQ) PSD Permit PSD-TX-761M3 and New Source Review (NSR) permit 4862B. Failure to comply with any condition or term set forth in this PSD Permit may result in enforcement action pursuant to Section 113 of the Clean Air Act (CAA). This PSD Permit does not relieve Equistar of the responsibility to comply with any other applicable provisions of the CAA (including applicable implementing regulations in 40 CFR Parts 51, 52, 60, 61, 72 through 75, and 98) or other federal and state requirements (including the state PSD program that remains under approval at 40 CFR § 52.2303).

In accordance with 40 CFR §124.15(b)(3), this PSD Permit becomes effective immediately upon issuance of this final decision.


Wren Stenger, Director
Multimedia Planning and Permitting Division

4/14/14
Date

Equistar Chemicals, L.P. (PSD-TX-761-GHG)
Prevention of Significant Deterioration Permit
For Greenhouse Gas Emissions
Final Permit Conditions

PROJECT DESCRIPTION

The proposed modification will expand production at the existing Olefins Plant at the Corpus Christi Complex in Corpus Christi, Texas. The capacity expansion includes modification of existing cracking furnaces and steam superheaters to allow increased firing rates, and the addition of some related process equipment. Hydrocarbon feedstocks are received at the Olefins Plant where they are fed into the pyrolysis furnaces. The pyrolysis furnaces, which are fired on natural gas and/or process gas including high hydrogen fuel gas, heat the feedstock to a high temperature where it cracks and reforms primarily as alkenes or olefins. The plant also produces other products at varying capacities, but ethylene is the predominant product.

The process effluent from the furnaces is quenched then cooled to separate fuel oil and pyrolysis gasoline (pygas) products from cracked gas stream. The cracked gases are compressed, dried, and cooled prior to beginning a series of purification/distillation steps. A hydrogen rich stream from the final chilling step is further purified in a reactor to convert the remaining CO to methane and water prior to being sold as product, used as plant fuel gas, or consumed internally in process.

The purification section consists of a series of distillation columns that separate the process gas stream into acetylene, ethylene, propylene, mixed C4s, and pyrolysis gasoline (pygas) products. Acetylene is converted to ethylene and ethane. Ethane and propane process gas recovered during distillation and separation are recycled as feedstock into the pyrolysis (cracking) furnaces.

Periodically, coke (primarily carbon) deposited in the furnace tubes shall be removed. This decoking operation consists of two steps, of which only the second produces GHG emissions:

- An initial steam purge which moves hydrocarbons and coke particles further into the process, then
- A burn step which produces CO and CO₂, and routes the vent stream including coke particles to a cyclone separator.

EQUIPMENT LIST

The following devices are subject to this GHG PSD permit.

FIN	EPN	Description
1A 1B 1K 1L	1A 1B 1K 1L	Four Cracking Furnaces (Combustion Units). Each furnace has a maximum rated capacity of 188 MMBtu/hr.
1C 1D 1E 1F 1G 1H 1J 1M	1C 1D 1E 1F 1G 1H 1J 1M	Nine Cracking Furnaces (Combustion Units). Each furnace has a maximum rated capacity of 290 MMBtu/hr.
3A 3B	3A 3B	Two Cracking Furnaces (Combustion Units). Each furnace has a maximum rated capacity of 126.7 MMBtu/hr.
5A 5B	5A 5B	Two Steam Superheaters (Combustion Units). Each steam superheater has a maximum rated capacity of 146 MMBtu/hr.
9A 9B	9A 9B	Decoke Pots
FUG	FUG	Process Fugitives
10 DBN MSS	10 DBN MSS	Elevated Flare (Combustion Unit). Flaring emissions associated with MSS activities from new components.

I. GENERAL PERMIT CONDITIONS

A. PERMIT EXPIRATION

As provided in 40 CFR §52.21(r), this PSD Permit shall become invalid if construction:

1. is not commenced (as defined in 40 CFR §52.21(b)(9)) within 18 months after the approval takes effect; or
2. is discontinued for a period of 18 months or more; or
3. is not completed within a reasonable time.

Pursuant to 40 CFR §52.21(r), EPA may extend the 18-month period upon a written satisfactory showing that an extension is justified.

B. PERMIT NOTIFICATION REQUIREMENTS

Permittee shall notify EPA Region 6 in writing or by electronic mail of the:

1. date construction is commenced, postmarked within 30 days of such date;
2. actual date of initial startup, as defined in 40 CFR §60.2, postmarked within 15 days of such date; and
3. date upon which initial performance tests will commence, in accordance with the provisions of Section V, postmarked not less than 30 days prior to such date.
Notification may be provided with the submittal of the performance test protocol required pursuant to Condition V.B.

C. FACILITY OPERATION

At all times, including periods of startup, shutdown, and maintenance, Permittee shall, to the extent practicable, maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA, which may include, but is not limited to, monitoring results, review of operating maintenance procedures and inspection of the facility.

D. MALFUNCTION REPORTING

1. Permittee shall notify EPA by mail within 48 hours following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in GHG emissions above the allowable emission limits stated in Section II and III of this permit.
2. Within 10 days of the restoration of normal operations after any failure described in I.D.1., Permittee shall provide a written supplement to the initial notification that includes a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in Section II and III, and the methods utilized to mitigate emissions and restore normal operations.
3. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or any law or regulation such malfunction may cause.

E. RIGHT OF ENTRY

EPA authorized representatives, upon the presentation of credentials, shall be permitted:

1. to enter the premises where the facility is located or where any records are required to be kept under the terms and conditions of this PSD Permit;
2. during normal business hours, to have access to and to copy any records required to be kept under the terms and conditions of this PSD Permit;
3. to inspect any equipment, operation, or method subject to requirements in this PSD Permit; and,
4. to sample materials and emissions from the source(s).

F. TRANSFER OF OWNERSHIP

In the event of any changes in control or ownership of the facilities to be constructed, this PSD Permit shall be binding on all subsequent owners and operators. Permittee shall notify the succeeding owner and/or operator of the existence of the PSD Permit and its conditions by letter; a copy of the letter shall be forwarded to EPA Region 6 within thirty days of the letter signature.

G. SEVERABILITY

The provisions of this PSD Permit are severable, and, if any provision of the PSD Permit is held invalid, the remainder of this PSD Permit shall not be affected.

H. ADHERENCE TO APPLICATION AND COMPLIANCE WITH OTHER ENVIRONMENTAL LAWS

Permittee shall construct this project in compliance with this PSD Permit, the application on which this permit is based, the TCEQ PSD Permits PSD-TX- 761M3 (when issued) and all other applicable federal, state, and local air quality regulations. This PSD permit does not release the Permittee from any liability for compliance with other applicable federal, state and local environmental laws and regulations, including the Clean Air Act.

I. ACRONYMS AND ABBREVIATIONS

AVO	Auditory, Visual, and Olfactory
BACT	Best Available Control Technology
CAA	Clean Air Act
CC	Carbon Content
CCS	Carbon Capture and Sequestration
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CH ₄	Methane
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry Standard Cubic Foot
EF	Emission Factor
EPN	Emission Point Number
FIN	Facility Identification Number
FR	Federal Register
GCV	Gross Calorific Value
GHG	Greenhouse Gas
gr	Grains
GWP	Global Warming Potential
HHV	High Heating Value
hr	Hour
HRSG	Heat Recovery Steam Generating
LAER	Lowest Achievable Emission Rate
lb	Pound
LDAR	Leak Detection and Repair
MAPD	Methyl Acetylene Propadiene
MMBtu	Million British Thermal Units
MSS	Maintenance, Start-up and Shutdown
NAAQS	National Ambient Air Quality Standards
NNSR	Nonattainment New Source Review
N ₂ O	Nitrous Oxides
NSPS	New Source Performance Standards
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance and/or Quality Control
SCFH	Standard Cubic Feet per Hour
SCR	Selective Catalytic Reduction
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TOC	Total Organic Carbon
TPY	Tons per Year
USC	United States Code
VHP	Very High Pressure
VOC	Volatile Organic Compound

II. Annual Emission Limits

Annual emissions, in tons per year (TPY) on a 12-month, rolling average, shall not exceed the following:

Table 1. Annual Emission Limits

FIN	EPN	Description	GHG Mass Basis		TPY CO ₂ e ^{2,3}	BACT Requirements
				TPY ^I		
1A	1A	Cracking Furnace	CO ₂	93,838	94,303	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	5.5		
			N ₂ O	1.1		
1B	1B	Cracking Furnace	CO ₂	93,838	94,303	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	5.5		
			N ₂ O	1.1		
1C	1C	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	8.4		
			N ₂ O	1.7		
1D	1D	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	8.4		
			N ₂ O	1.7		
1E	1E	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	8.4		
			N ₂ O	1.7		
1F	1F	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	8.4		
			N ₂ O	1.7		
1G	1G	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	8.4		
			N ₂ O	1.7		
1H	1H	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	8.4		
			N ₂ O	1.7		
1J	1J	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	8.4		
			N ₂ O	1.7		
1K	1K	Cracking Furnace	CO ₂	93,838	94,303	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	5.5		
			N ₂ O	1.1		
1L	1L	Cracking Furnace	CO ₂	93,838	94,303	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o.
			CH ₄	5.5		
			N ₂ O	1.1		

FIN	EPN	Description	GHG Mass Basis		TPY CO ₂ e ^{2,3}	BACT Requirements
				TPY ¹		
1M	1M	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o
			CH ₄	8.4		
			N ₂ O	1.7		
1N	1N	Cracking Furnace	CO ₂	144,751	145,468	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o
			CH ₄	8.4		
			N ₂ O	1.7		
3A	3A	Cracking Furnace	CO ₂	63,241	63,542	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o
			CH ₄	3.7		
			N ₂ O	0.7		
3B	3B	Cracking Furnace	CO ₂	63,241	63,542	Maintain a Minimum Thermal Efficiency of 87%. See permit condition III.A.1.m. through o
			CH ₄	3.7		
			N ₂ O	0.7		
5A	5A	Steam Superheater	CO ₂	72,675	73,018	Steam Superheater Gas Exhaust Temperature ≤ 420 °F on a 365-day rolling average. See permit condition III.A.1.m. through o
			CH ₄	4.2		
			N ₂ O	0.8		
5B	5B	Steam Superheater	CO ₂	72,675	73,018	Steam Superheater Gas Exhaust Temperature ≤ 420 °F on a 365-day roling average. See permit condition III.A.1.m. through o
			CH ₄	4.2		
			N ₂ O	0.8		
9A 9B	9A 9B	Decoke Pot	CO ₂	1,270 ⁴	1,270 ⁴	Proper furnace design and operation. See permit condition III.A.1.p and q
FUG	FUG	Fugitive Process Emissions	CH ₄	No Emission Limit Established ⁵	No Emission Limit Established ⁵	Implementation of LDAR/Remote Sensing program. See permit condition III.A.2.
10 DBN MSS	10 DBN MSS	Elevated Flare - MSS	CO ₂	3,866	4,201	Good Combustion Practices. See permit condition III.A.3.
			CH ₄	13.3		
			N ₂ O	0.01		
Totals ⁶			CO ₂	1,955,080	CO ₂ e 1,965,475	
			CH ₄	145		
			N ₂ O	23		

1. The GHG Mass Basis TPY limits are informational only and do not constitute an enforceable limit.
2. Compliance with the annual emission limits (tons per year) is based on a 12-month rolling total, to be updated the last day of the following month. The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions from the facility during all operations and include MSS activities.
3. Global Warming Potentials (GWP): CH₄ = 25, N₂O = 298
4. The decoke pot (EPN: 9A and 9B) emissions are estimated to be 1,270 TPY CO₂/CO₂e for both decoke pots combined.
5. Fugitive process emissions from FUG are estimated to be 18.4 TPY of CH₄, and 460 TPY CO₂e. In lieu of an emission limit, the emissions will be limited by implementing a design/work practice standard as specified in the permit.
6. Total emissions include the PTE for fugitive emissions. Totals are given for informational purposes only and do not constitute emission limits.

III.SPECIAL PERMIT CONDITIONS

A. Emission Unit Work Practice Standards, Operational Requirements, and Monitoring

1. Cracking Furnaces (EPNs: 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1J, 1K, 1L, 1M, 1N, 3A and 3B), Steam Superheaters (EPNs: 5A and 5B) and Decoke Pot (EPNs: 9A and 9B)

- a. The cracking furnaces and steam superheaters shall combust pipeline quality natural gas and/or process gas including high hydrogen gas (fuel gas).
- b. For combustion units identified in this permit:
 - i. The fuel flow of the fuel fired in the cracking furnaces (1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1J, 1K, 1L, 1M, 1N, 3A and 3B) and Steam Superheaters (5A and 5B) shall be continuously monitored and recorded.
 - ii. Fuel flow rate shall be measured and recorded using an operational non-resettable elapsed flow meter or by recording the flow rate data in an electronic format with individual flow measurements being taken no less frequently than once every 15 minutes. Electronic data may be reduced to hourly averages for recordkeeping purposes.
 - iii. The total fuel combusted monthly shall be recorded.
 - iv. The fuel gross calorific value (GCV) [high heat value (HHV)], carbon content and, if applicable, molecular weight, shall be determined, at a minimum, hourly using an online chromatograph, or by the procedures contained in 40 CFR Part 98.34(b)(3). Records of the fuel GCV shall be maintained for a minimum period of five years. Upon request, Permittee shall provide a sample and/or analysis of the fuel that is fired in any unit covered by this permit at the time of the request, or shall allow a sample to be taken by EPA for analysis.
- c. Permittee shall calibrate and perform a preventative maintenance check of the fuel gas flow meters and document annually
- d. Permittee shall install, operate, and maintain an O₂ analyzer for the cracking furnaces (1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1J, 1K, 1L, 1M, 1N, 3A and 3B) and steam superheaters (9A and 9B).
- e. Oxygen analyzers shall continuously monitor and record the excess oxygen concentration in the furnace flue gases. The monitoring data shall be reduced to hourly average concentrations at least once every day using a minimum of four equally spaced data points over each one-hour period. Fewer than four data points may be used for hourly averages during periods of calibration, or other activities required by III,A,1,g and h below.

- f. Permittee shall perform a preventative maintenance check of oxygen control analyzers and document quarterly.
- g. The oxygen analyzers shall be quality-assured at least once per quarter using cylinder gas audits (CGAs) or Relative Accuracy Test Audit (RATA) in accordance with 40CFR Part 60, Appendix F, Procedure 1.
- h. Permittee will validate oxygen analyzers with zero and span gas at least weekly to maintain 1% accuracy.
- i. All analyzers identified in this section III.A.1. shall achieve 95 percent on-stream time or greater.
- j. Permittee shall utilize insulation materials where practicable to reduce heat loss.
- k. The cracking furnaces EPNs 1A, 1B, 1K and 1L shall not exceed the one-hour maximum firing rate of 188 MMBtu/hr (HHV), cracking furnaces EPNs 1C, 1D, 1E, 1F, 1G, 1H, 1J, 1M and 1N shall not exceed the one-hour maximum firing rate of 290 MMBtu/hr (HHV), cracking furnaces EPNs 3A and 3B shall not exceed the one-hour maximum firing rate of 126.7 MMBtu/hr (HHV), and steam super heaters EPNs 5A and 5B shall not exceed the one-hour maximum firing rate of 146 MMBtu/hr (HHV).
- l. The one-hour maximum firing rate shall be calculated daily to demonstrate compliance with the firing rate conditions in III.A.1.k. The heat input shall be determined using the appropriate procedure as found in 40 CFR Part 75 Appendix F Section 5.
- m. Permittee shall continuously monitor and record the steam superheater gas exhaust temperature and flow rate hourly and limit the exhaust temperature to less than or equal to 420 °F on a 365-day rolling average basis.
- n. The Permittee shall maintain a minimum overall thermal efficiency of 87% or greater on a 12-month rolling average basis, calculated monthly, for the furnaces (EPNs: 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1J, 1K, 1L, 1M, 1N, 3A and 3B) excluding periods of decoking. Thermal efficiency for furnaces will be calculated monthly from these parameters using equation G-1 from American Petroleum Institute (API) methods 560 (4th ed.) Annex G.
- o. The steam superheaters (EPNs: 9A and 9B) will be continuously monitored for exhaust temperature, input fuel temperature, and stack oxygen.
- p. The Permittee shall monitor the furnace for coke buildup and perform a decoke when needed. Records shall be maintained of all decokes including the date and duration in hours.
- q. The furnace coils shall be decoked, using decoking pots.
- r. The Permittee shall keep records of each MSS event to include the date, time, duration, and estimated emissions.
- s. Permittee shall calculate, on a monthly basis, the amount of CO₂ emitted from combustion during normal operations, and from decoking operations, in tons/yr using equation C-5 in 40 CFR Part 98 Subpart C, converted to short tons.

Compliance shall be based on a 12-month rolling basis to be updated by the last day of the following month.

- t. Permittee shall calculate the CH₄ and N₂O emissions on a 12-month rolling basis to be updated by the last day of the following month. Permittee shall determine compliance with the CH₄ and N₂O emissions limits contained in this section using the default CH₄ and N₂O emission factors contained in Table C-2 and equation C-8 of 40 CFR Part 98 and the measured actual heat input (HHV), converted to short tons.
- u. Permittee shall calculate the CO₂e emissions on a 12-month rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1, as published on November 29, 2013 (78 FR 71904). The record shall be updated by the last day of the following month.

2. Piping Fugitives (EPNs: FUG)

- a. Permittee shall implement the TCEQ 28VHP leak detection and repair (LDAR) program for fugitive emissions of methane for components that are required to be monitored via instrumented Method 21 monitoring by another permit or rule.
- b. Permittee shall conduct quarterly remote sensing for detection of leaks for fugitive emissions from components that are not required to be monitored via instrumented Method 21 monitoring by another permit or rule. Leaks identified by remote sensing will follow the same repair schedule as the 28VHP LDAR components.
- c. The Permittee shall implement an audio/visual/olfactory (AVO) monitoring program to monitor for leaks in between instrument monitoring required by III.A.2.a. and b.
- d. Permittee shall use high quality components and materials of construction that is compatible with the service in which they are employed.

3. Flare (10 DBN MSS)

- a. The flare shall be designed to achieve a minimum destruction and removal efficiency (DRE) of 99.5% for methane based on flowrate and gas composition measurements.
- b. GHG emissions shall be calculated as specified in 40 CFR Part 98 Subpart X § 98.253(b)(1) through (b)(3).
- c. The flare is a continuous use flare, designed for control of routine venting, during maintenance, startup, and shutdown (MSS) activities, and upset conditions. This permit condition only applies to MSS emissions associated with this expansion project.
- d. The flare shall only combust pipeline natural gas in the pilots as a continuous stream.
- e. The flare shall be steam-assisted.
- f. Each flare shall be equipped with a flow meter which will determine the flow at least

once each 15 minutes, and block one hour records will be maintained. Determination of actual flow is not required during periods of calibration as required by III.A.3.g below.

- g. Each flare shall be equipped with a gas composition analyzer which will provide the gas composition at least once each hour. The analyzer will be calibrated weekly. Records of gas composition will be maintained.
- h. Permittee must record the time, date, fuel heat input (HHV) in MMBtu/hr and duration of each MSS event. The records must include hourly CH₄ emission levels as measured by the in-line gas analyzer (Gas chromatograph or equivalent with volumetric stack gas flowrate) and the calculations based on the actual heat input for the CO₂, N₂O, and CH₄ emissions during each MSS event. These records must be kept for five years following the date of each event.
- i. The flare shall be designed and operated in accordance with 40 CFR 60.18 specifications of minimum heating value of the waste gas, maximum tip velocity, and pilot flame monitoring. An infrared monitor is considered equivalent to a thermocouple for flame monitoring purposes.

B. Continuous Emissions Monitoring Systems (CEMS)

- 1. As an alternative to Special Condition III.A.1.s., Permittee may install a CO₂ CEMS and volumetric stack gas flow monitoring system with an automated data acquisition and handling system for measuring and recording CO₂ emissions discharged to the atmosphere, and use these values to show compliance with the annual emission limit in Table 1.
- 2. Permittee shall ensure that all required CO₂ monitoring systems/equipment are installed and all certification tests are completed on or before the earlier of 90 unit operating days or 180 calendar days after the date the unit commences operation.
- 3. Permittee shall ensure compliance with the specifications and test procedures for CO₂ emission monitoring systems at stationary sources, 40 CFR Part 75, or 40 CFR Part 60, Appendix B, Performance Specification numbers 1 through 9, as applicable.

IV. Recordkeeping and Reporting

The requirements of section IV of this permit apply only to the equipment authorized by this permit and listed in Table 1.

A. Records

- 1. In order to demonstrate compliance with the GHG emission limits in Table 1, the Permittee will monitor the following parameters and summarize the data on a calendar month basis.

- a. Operating hours for the listed air emission sources;
 - b. Records of the fuel consumed by the fired emission sources;
 - c. The fuel usage for all combustion sources, using continuous fuel flow monitors (a group of equipment can utilize a common fuel flow meter, as long as actual fuel usage is allocated to the individual equipment based upon actual operating hours and maximum firing rate);
 - d. Hourly fuel sampling of plant fuel gas, or other frequencies as allowed by 40 CFR Part 98 Subpart C §98.34(b)(3); and
 - e. Records of decoking cycle times in hours and frequency.
2. Permittee shall maintain a file of all records, data, measurements, reports, and documents related to the operation of the facility, including, but not limited to, the following: all records or reports pertaining to significant maintenance performed on any system or device at the facility; duration of startup, shutdown; the initial startup period for the emission units; pollution control units; malfunctions; all records relating to performance tests, calibrations, checks, and monitoring of combustion equipment; duration of an inoperative monitoring device and emission units with the required corresponding emission data; and all other information required by this permit recorded in a permanent form suitable for inspection. The file shall be retained for not less than five years following the date of such measurements, maintenance, reports, and/or records.
3. Permittee shall maintain records and submit a written report of all excess emissions of CO₂e constituents to EPA semi-annually except when more frequent reporting is specifically required by an applicable subpart, or the Administrator or authorized representative, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. The report is due on the 30th day following the end of each semi-annual period and shall include the following:
 - a. Time intervals, data and magnitude of the excess emissions, the nature and cause (if known) of corrective actions taken and preventive measures adopted;
 - b. Applicable time and date of each period during which the monitoring equipment was inoperative (monitoring down-time);
 - c. A statement in the report of a negative declaration; that is; a statement when no excess emissions occurred or when the monitoring equipment has not been inoperative, repaired or adjusted;
 - d. Any failure to conduct any required source testing, monitoring, or other compliance activities; and
 - e. Any violation of limitations on operation.
4. Excess emissions shall be defined as any period in which the facility emissions exceed an emission or other limit set forth in this permit or a malfunction occurs causing such an emissions exceedance.

5. Excess emissions indicated by GHG emission source certification testing or compliance monitoring shall be considered violations of the applicable emission limit for the purpose of this permit
6. Instruments and monitoring systems required by this PSD permit shall have a 95% on-stream time on an annual basis.
7. All records required by this PSD Permit shall be retained for not less than 5 years following the date of such measurements, maintenance, and reporting.
8. Continuously means individual measurements no less frequent than once every 15 minutes. Electronic data may be reduced to hourly averages for recordkeeping purposes.

V. Performance Testing Requirements:

- A.** The Permittee shall perform stack sampling and other testing to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from one of each type of the stacks of the Cracking Furnaces and Steam Superheaters, i.e. one of the following Cracking Furnaces designed for 188 MMBtu/hour (1A, 1B, 1K or 1L), one of the following Cracking Furnaces designed for 290 MMBtu/hour (1C, 1D, 1E, 1F, 1G, 1H, 1J, 1M or 1N), one of the following Cracking Furnaces designed for 126.7 MMBtu/hour (3A or 3B) and one of the following Steam Superheaters (5A or 5B) to determine the initial compliance with the CO₂ emission limits established in this permit. Sampling shall be conducted in accordance with 40 CFR § 60.8 and EPA Method 3a or 3b for the concentration of CO₂.
 1. Multiply the CO₂ hourly average emission rate determined under maximum operating test conditions by 8,760 hours.
 2. If the above calculated CO₂ emission total does not exceed the tons per year (TPY) specified on Table 1, no compliance strategy needs to be developed.
 3. If the above calculated CO₂ emission total exceeds the tons per year (TPY) specified in Table 1, the facility shall:
 - a. Document the potential to exceed in the test report; and
 - b. Explain within the report how the facility will assure compliance with the CO₂ emission limit listed in Table 1.
- B.** No later than 180 days after initial startup, or restart after modification of the facility, performance tests(s) shall be conducted and a written report of the performance testing results furnished to the EPA within 60 days after the testing is completed. During subsequent operations, stack sampling shall be performed within 120 days if current production rates exceed the production rate during stack testing by 10 percent or greater, additional sampling may be required by EPA.
- C.** Permittee shall submit a performance test protocol to afford the EPA the opportunity to have an observer present and/or to attend a pre-test meeting. The performance test shall be conducted in accordance with the submitted protocol, and any changes

required by EPA. If there is a delay in the original test date, the facility must provide at least 7 days prior notice of the rescheduled date of the performance test unless EPA approves an earlier rescheduled date due to unforeseen events, such as delays that are caused by weather.

- D.** Performance tests shall be conducted under such conditions to ensure representative performance of the affected facility. Permittee shall make available to the EPA such records as may be necessary to determine the conditions of the performance tests.
- E.** Permittee shall provide, or cause to be provided, performance testing facilities as follows:
 - 1. Sampling ports adequate for test methods applicable to this facility,
 - 2. Safe sampling platform(s),
 - 3. Safe access to sampling platform(s), and
 - 4. Utilities for sampling and testing equipment.
- F.** Unless otherwise specified, each performance test shall consist of three separate runs using the applicable test method. For purposes of determining compliance with an applicable test method, the arithmetic mean of the results of the three runs shall apply.
- G.** Emissions testing, as outlined above, shall be performed every five years, plus or minus 6 months, after the previous performance test was performed, or within 180 days after the issuance of a permit renewal, whichever comes later, to verify continued performance at the permitted emission limits.

VI. Agency Notifications

Permittee shall submit GHG permit applications, permit amendments, and other applicable permit information to:

Multimedia Planning and Permitting Division
EPA Region 6
1445 Ross Avenue (6 PD-R)
Dallas, TX 75202
Email: Group R6AirPermits@EPA.gov

Permittee shall submit a copy of all compliance and enforcement correspondence as required by this Approval to Construct to:

Compliance Assurance and Enforcement Division
EPA Region 6
1445 Ross Avenue (6EN)
Dallas, TX 75202